Avid® AS3000
Setup Guide

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Using This Guide

The Avid® AS3000 network server is the foundation for reliable, high-productivity media production. It is designed for media facilities and broadcasters, delivering stable operation and class-leading value.

This document describes the basic features for all Avid AS3000 models. Therefore, your system might not contain certain features that are covered in the documentation. See your Avid product documentation for details about installing software and PCIe cards.

Symbols and Conventions

Avid documentation uses the following symbols and conventions:

Symbol or Convention	Meaning or Action
	A note provides important related information, reminders, recommendations, and strong suggestions.
	A caution means that a specific action you take could cause harm to your computer or cause you to lose data.
	A warning describes an action that could cause you physical harm. Follow the guidelines in this document or on the unit itself when handling electrical equipment.
>	This symbol indicates menu commands (and subcommands) in the order you select them. For example, File > Import means to open the File menu and then select the Import command.
‣	This symbol indicates a single-step procedure. Multiple arrows in a list indicate that you perform one of the actions listed.
(Windows), (Windows only), (Macintosh), or (Macintosh only)	This text indicates that the information applies only to the specified operating system, either Windows or Macintosh OS X.
Bold font	Bold font is primarily used in task instructions to identify user interface items and keyboard sequences.
Italic font	Italic font is used to emphasize certain words and to indicate variables.

Symbol or Convention	Meaning or Action
`Courier Bold font`	Courier Bold font identifies text that you type.
Ctrl+key or mouse action	Press and hold the first key while you press the last key or perform the mouse action. For example, Command+Option+C or Ctrl+drag.

If You Need Help

If you are having trouble using your Avid product:

1. Retry the action, carefully following the instructions given for that task in this guide. It is especially important to check each step of your workflow.
2. Check the latest information that might have become available after the documentation was published.

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1 AS3000 Overview

The document describes features and hardware of the AS3000. Depending on your configuration, your AS3000 system might not contain certain features and hardware that are covered in the document. The term “AS3000” is used when the information applies to all models.

AS3000 uses industry standard components to deliver high capacity, high performance collaborative media solutions. A single AS3000 chassis provides server or client functionality depending on the Avid software application. Each AS3000 is comprised of two mirrored system drives, integrated RAID controller, four 10/100/1000 Mbps (hereafter referred to as 1 Gb) Ethernet ports, two PCI Express x8 slots, plus redundant power and fans.

AS3000 Hardware

The Avid AS3000 is a standalone system that runs the application software for a number of Avid systems. It is a single or dual-processor, rack-mount, Windows® computer that contains two 1 TB drives for storing data. See your Avid product documentation for specifics on installing Avid application software and configuring the AS3000.

The Windows Product Key Certificate of Authenticity is attached to the top cover of the Avid AS3000 enclosure.

Operating Systems

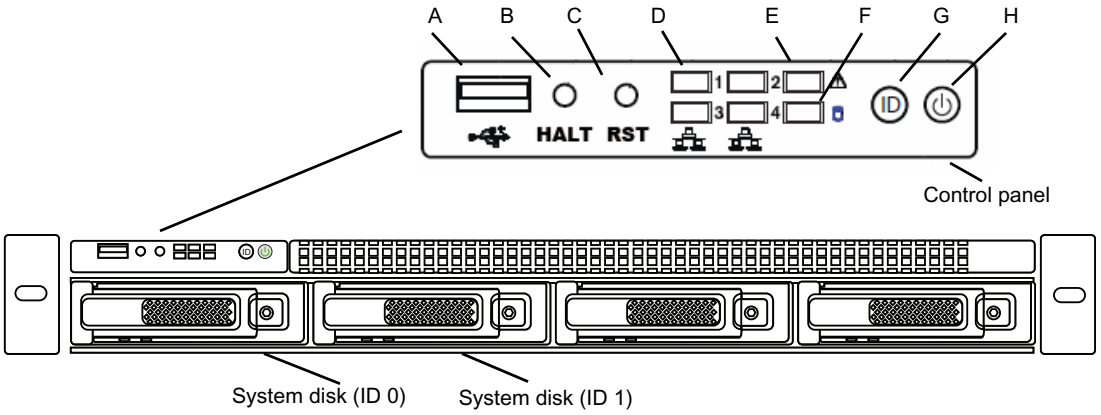
The following client operating systems are supported. For additional information, see your Avid product documentation.

- Windows Storage Server 2008
- Windows Server 2008 Standard
- Windows Server 2008 R2 Standard
- Windows Server 2008 R2 Enterprise
- Windows 7 Pro 64 Bit
- Windows 7 Pro 32 Bit

Avid AS3000 Front Panel and LEDs

The front of the AS3000 provides access to 4 drive carriers, a USB port, network port activity LEDs, disk activity LED, an error LED, a system ID button, and Power and Reset buttons. The following illustration shows the front view of the AS3000.

AS3000 Front View



The following table describes the control panel shown in the previous figure.

System Control Panel

Letter	Component	Description
A	Universal Serial Bus (USB) port	USB 2.0 device port on the front of the system supports one USB device. Recommended for use when re-imaging the system drives or loading software. Two more USB ports are located on the back of the system.
B	Halt button	The Halt button is not operational on the AS3000.
C	System reset button	Performs a soft reset when pressed. A soft reset restarts the system; it clears all active program memory (you lose unsaved work) and shuts down all active programs.

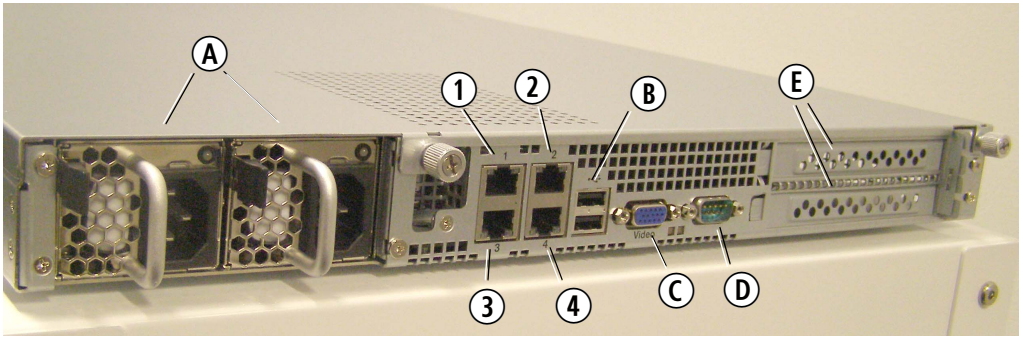
System Control Panel

Letter	Component	Description
D	Four green network activity LEDs	Illuminates green when a good network connection is established and blinks when there is network activity on the four built-in 1-Gb Ethernet ports. The number beside the LED corresponds with the number beside the Gb Ethernet port on the rear of the enclosure. For example, Connector 1 is LED 1 on the front. See "AS3000 Rear Panel" on page 14.
E	Red System error LED	Illuminates red when an error is detected with the system (fan, power supply, temperature, voltage).
F	System Drive activity LED	Indicates drive activity from the onboard SATA controller and blinks when either of the system drives is being accessed.
G	System ID button	When pressed it illuminates (blinks) blue and also illuminates an LED on the rear of the enclosure. The rear LED is also blue and is visible on the lower left-hand side of the Ethernet ports inside of the enclosure. It is used to identify a system for servicing when it is installed in a high-density rack/cabinet populated with several other similar systems.
H	Power button	Press to power on the enclosure. Power button illuminates green when the power is on.

AS3000 Rear Panel

The AS3000 rear panel provides access to the power supplies, video monitor port, four 1 Gigabit (Gb) Ethernet connectors, serial connector, expansion slots, and two USB connectors for the application key, and keyboard or mouse.

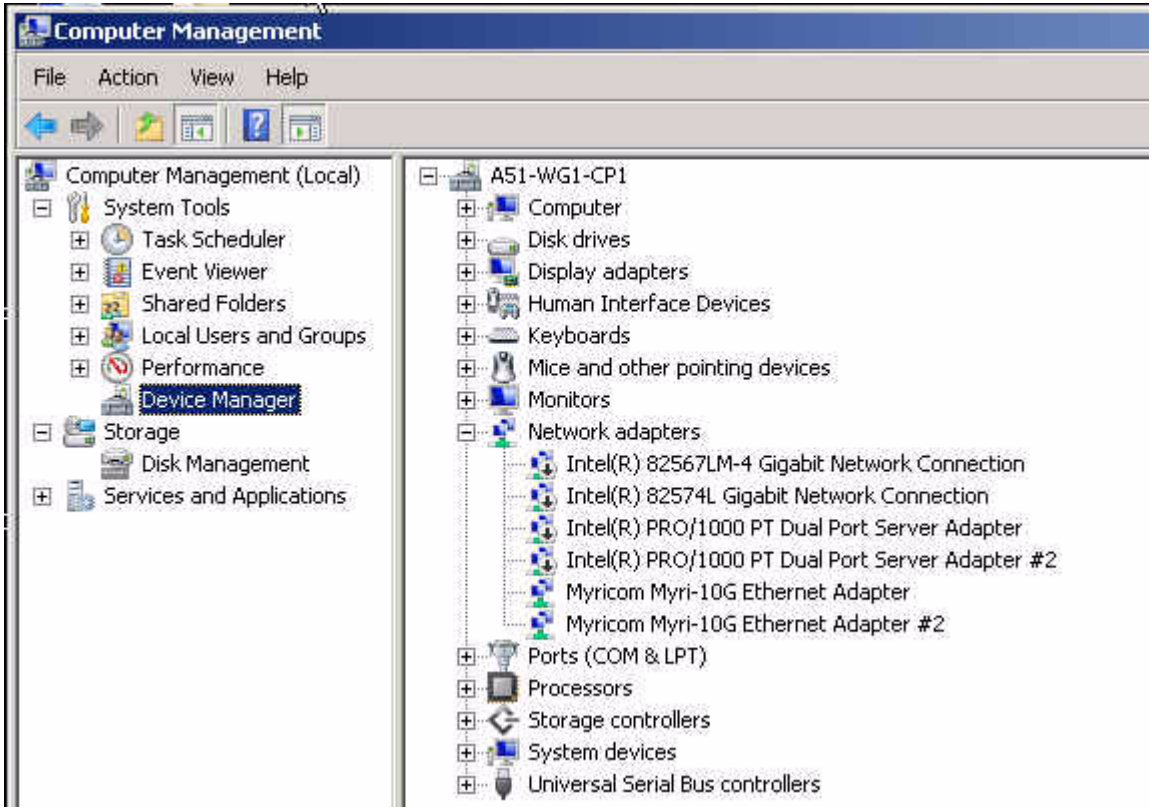
AS3000 Rear Panel



AS3000 Rear Panel

Letter/ Numeral	Component	Description
1 - 4	Four 1 Gigabit (Gb) Ethernet Connectors	Ports 2 and 4 are identified as Intel PRO/1000 PT Dual Port Server Adapter. The number beside the network port corresponds to the LED on the front of the enclosure. For example, Connector 1 is LED 1 on the front.
A	Power Supplies	The two power supplies are redundant and can be replaced if a failure occurs. See “Replacing a Power Supply” on page 56.
B	USB Ports	Two USB 2.0 ports for the application key, and keyboard or mouse. One additional USB port is located on the front of the system.
C	Video monitor port	
D	Serial Connector	
E	PCIe Expansion slots	See “Installing and Removing a PCIe Add-in Card” on page 46

The following illustration shows the Device Manager running on an AS3000 system. This system has two Myricom cards installed for an Interplay Copy Provider. The illustration also shows the Intel Pro/1000 PT Dual Port Server adapters and the Intel connections used for Ports 1 and 3.



System Drives

There are two system drives accessible from the front of the AS3000 enclosure. These two drives are mirrored and if a failure occurs on either one of the system drives, you can pull the failed drive out of the enclosure and install a replacement drive without turning off the AS3000 enclosure. All AS3000 operations continue to run uninterrupted. See “Replacing System Drives in the AS3000” on page 38.

Power Supplies

There are two power supplies accessible from the rear of the AS3000 enclosure. If a failure occurs on either one of the power supplies, you can pull the failed power supply out of the enclosure and install a replacement power supply without turning off the AS3000 enclosure. All AS3000 operations continue to run uninterrupted. See “Replacing a Power Supply” on page 56.

2 Installing the AS3000 System

This chapter describes how to install the AS3000 server. The server can be standalone or connected to an in-house network.

Topics in this chapter include:

- Avid AS3000 Server
- Installing AS3000 Hardware in a Rack
- Installing and Removing the Front Bezel
- Using a KVM to Connect a Keyboard, Monitor, and Mouse
- Connecting Power Cords
- Connecting to an Ethernet Network
- Turning On the Avid AS3000 Server Hardware

Avid AS3000 Server

The AS3000 ships with four on-board 1-Gb Ethernet ports. The AS3000 has two autosensing power supply modules that operate from 100 to 240 VAC at 50 to 60 Hz. For detailed specifications, see “Electrical” on page 67.

The Windows Product Key Certificate of Authenticity is attached to the top of the server.

The standard AS3000 components include the following:

- Data drives — Each server comes standard with two, 1TB, externally accessible, enterprise class, 3.5 inch SATA disk drives. See “Replacing System Drives in the AS3000” on page 38.
- Keyboard and mouse are optional on some models. See “Using a KVM to Connect a Keyboard, Monitor, and Mouse” on page 29.
- Removable bezel and a package of bezel keys.
- Accessory kit — a plastic bag containing spare cables and the following items:
  - Drive lock keys
  - Drive carrier screws
  - Power cables
  - Hardware for the rack mount kit including round hole adapters
- All systems ship with a 22 to 32 inch rack mount kit. For deeper racks, you can separately order a 28 to 37 inch rack mount kit. See “Installing AS3000 Hardware in a Rack” on page 19.
- Ethernet cables — You need to supply Ethernet cables for the Avid AS3000 server clients. See the Ethernet cabling section under “Supported Cabling” on page 69.

Optional line cards will require appropriate cables. See “Supported Cabling” on page 69.

Keep the accessories that ship in the AS3000. You might need them later for installing optional disk drives or installing the server in a rack.

Keep the shipping boxes that come with your AS3000 hardware. You might need to repackage and ship the components in the future.

Installing AS3000 Hardware in a Rack

The Avid AS3000 server is designed for 19-inch (483-mm) rack configurations and requires one EIA rack units (1U), or 1.75 inches (44.45 mm) of rack space. The rail kit installs into rails that are between 23-inches (584.2-mm) to 31-inches (787.4-mm) inches deep. An optional rail kit is available for racks that are up to 37 inches deep.

The Avid AS3000 server includes rack mounting slide rails. The standard rail configuration is for racks with square mounting holes. Optional brackets are included for racks with round holes. The rack-mounting kit requires inner slide rails be mounted to the server and the outer slide rails are mounted to the rack. Once both the inner and outer rails are in place, slide the server with the inner rails attached into the outer rails. Secure the server in the front of the rack using screws that are appropriate for the type of rack you are using.

The AS3000 is designed to be installed horizontally in a rack. Installing the AS3000 on an angle or in a sloped console causes the internal drives to wear faster than the intended life of the drive.

To ensure the stability of the rack enclosure, start from the bottom when you install the rack components in the rack enclosure.

The AS3000 has vent holes on the top of the enclosure. Avid has performed thermal testing with the top vent holes blocked, and the results indicated that even with the top vent holes blocked, the AS3000 still operates within the temperature tolerances.

Rack-mount Requirements

Please observer the following rack requirements:

- Elevated Operating Ambient — If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment might be greater than room ambient. Therefore, consider installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.
- Reduced Air Flow — Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

  Avid AS3000 airflow is from the front of the enclosure to the rear. Make allowances for cooling air to be available to the front panel surface and no restrictions at the rear.
- Mechanical Loading — Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

  Make sure your rack enclosure is stable enough to prevent tipping over when one or more Avid AS3000 servers are extended on the sliding rails.
- Circuit Overloading — Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- Reliable Grounding — Reliable grounding of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (for example, use of power strips).
- Inside Enclosure Access — If you want to extend the enclosure, and remove the top cover, you must allow 0.5 in (1.3 cm) clearance on top of the enclosure for cover removal.

Separating the Slide Rails

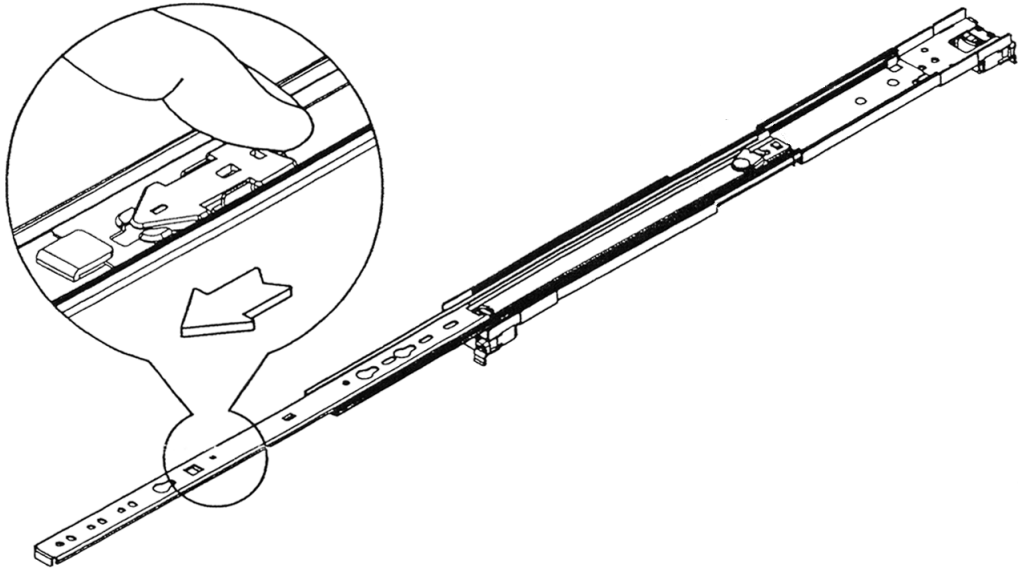
You need to separate the slide rails and attach the inner “movable” section to the AS3000 and the outer “fixed” section to the rack rails.

To separate the slide rails:

1. Slide the slide rail completely open.
2. Press the arrow-shaped spring clip on the slide rail as shown in the following illustration.

The blowup of the spring clip shown in the illustration is on the bottom side of the slide rail.

Separating the Slide Rails



3. Pull and separate the two halves.
4. Repeat these steps to separate the second slide rail.

Attaching Inner Slide Rails to the Avid AS3000 Server

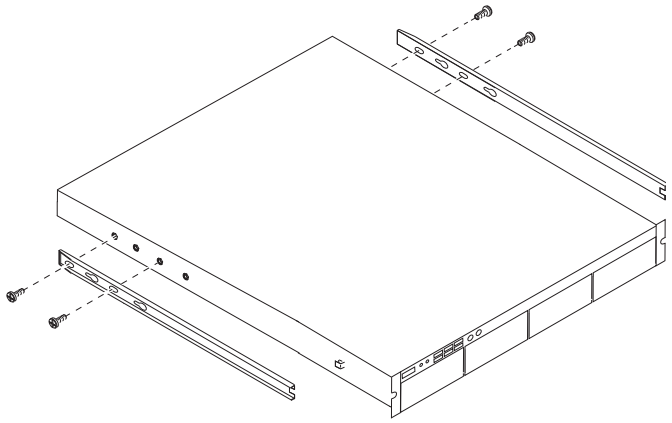
Attach the inner slide rails that were separated from the outer slide rails to the AS3000.

To attach the inner slide rails:

1. Position the inner slide rail against the side of the server so that the spring clip end is toward the rear of the server. The hole in the front of the inner slide rail fits over the tab at the front of the server.
2. Secure the inner slide rail to the server with two of the small (M4x5) screws.

You might find more screws in the rail kit than are described in this procedure.

Attaching the Inner Slide Rails



3. Repeat this procedure to attach the second inner slide rail on the other side of the server.

Attaching the Outer Rails to a Square-Hole Rack

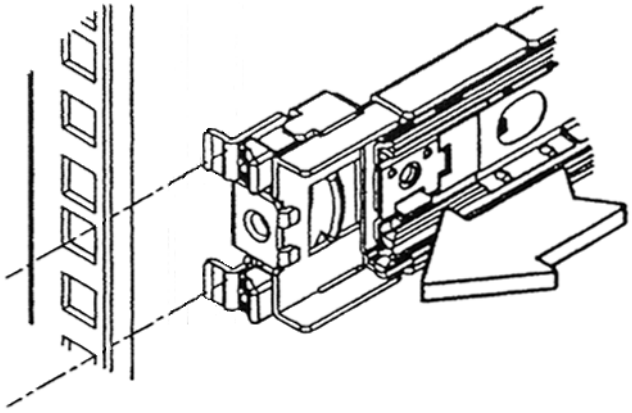
After separating the slide rails as previously described (see “Separating the Slide Rails” on page 21), perform one of the following procedures. If your mounting rails have round holes, see “Attaching the Outer Rails to a Round-Hole Rack” on page 25.

To attach the outer slide rails to a square hole rack:

1. Align the front of the outer slide rail bracket assembly with the front rack-mounding holes.

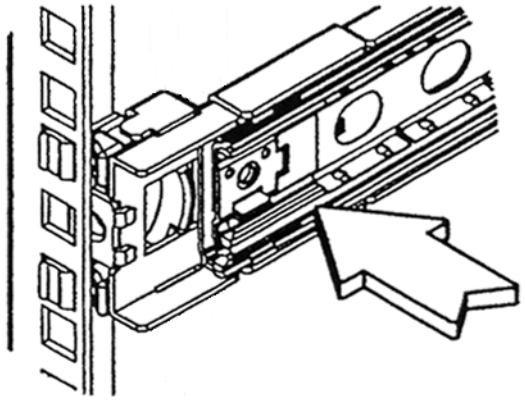
You should have someone helping you hold the slide rails level while you are positioning them in the rack.

Positioning the Outer Slide Rail with the Front Rack-Mounting Rail

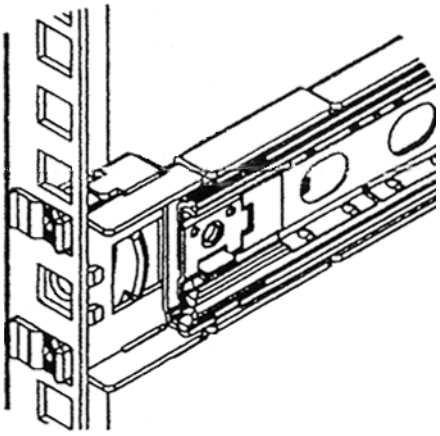


2. Push the outer slide rail bracket assembly through the holes in the front of the vertical mounting rail of the rack.
3. Push the outer side towards the outside of the rack and make sure that the black plastic retainers are in the hole.

Insert the Outer Slide Rail to the Front Rack-Mounting Rail

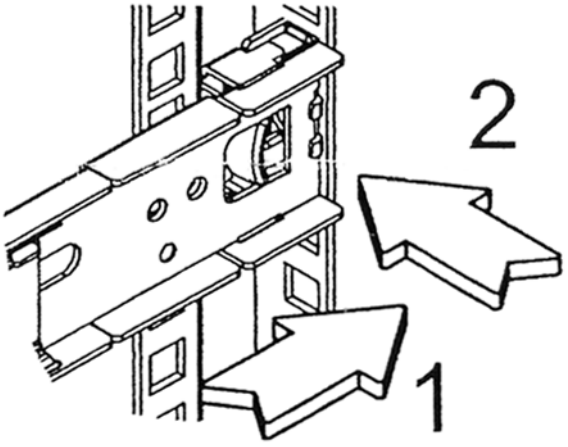


Outer Slide Rail Attached to the Front Rack-Mounting Rail



4. Adjust the outer slide rail bracket assembly to the rear mounting rail.
5. Install the rear outer slide rail bracket assembly in the rear mounting rail as you did for the front rack-mounting rail.

Securing the Outer Slide Rail to the Rear Rack-Mounting Rail



6. Repeat this procedure to attach the second outer slide rail on the other side of the rack.

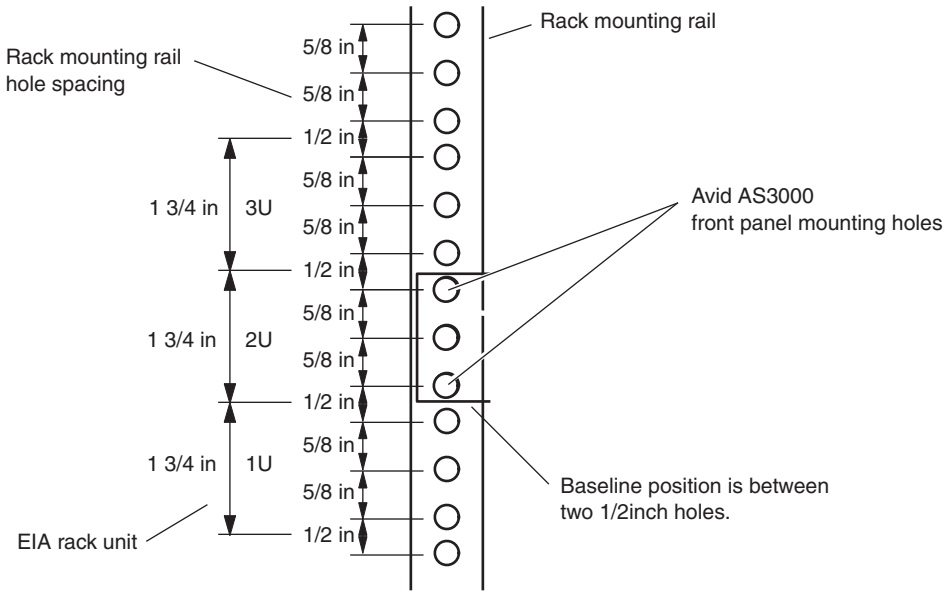
Attaching the Outer Rails to a Round-Hole Rack

After separating the slide rails as previously described (see "Separating the Slide Rails" on page 21), perform one of the following procedures. If your mounting rails have square holes, see "Attaching the Outer Rails to a Square-Hole Rack" on page 22.

To attach the outer slide rails to a round hole rack:

1. Select a position in the rack where the AS3000 is at the proper baseline position.

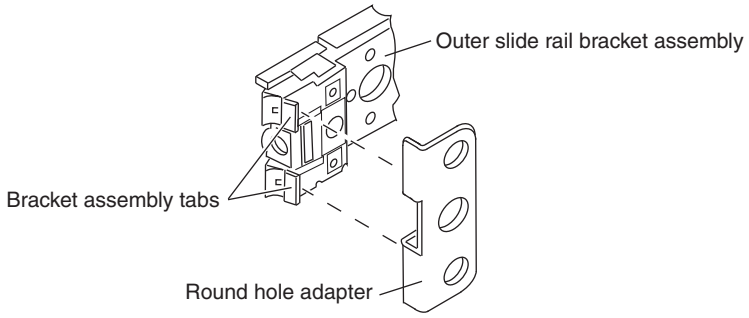
Positioning the Avid AS3000 server in a round hole rack



The AS3000 has vent holes on the top of the enclosure. Avid has performed thermal testing with the top vent holes blocked, and the results indicated that even with the top vent holes blocked, the AS3000 still operates within the temperature tolerances.

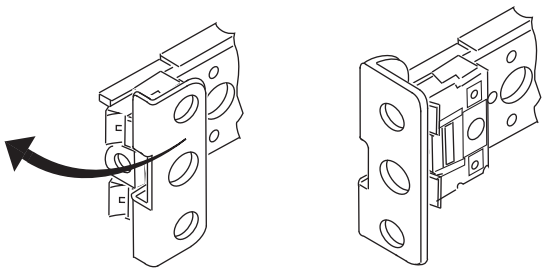
2. Locate the two round hole adapters (which ship in the accessory kit plastic bag, not in the rack mount kit box) and position the adapter on the end of the outer slide rail bracket assembly as shown in the following illustration.

Attaching the Round Hole Adapter to the Bracket Assembly



3. With the bracket assembly tabs aligning with the cut-out in the round hole adapter, swing the adapter so that the holes face the front of the bracket assembly as shown in the following illustration.

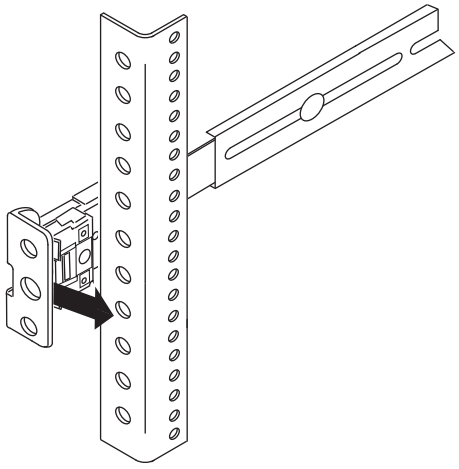
Positioning the Round Hole Adapter to the Bracket Assembly



4. Slide the outer slide rail bracket assembly onto the side rack-mounting rail so that the round hole adapter is over the rack rail.

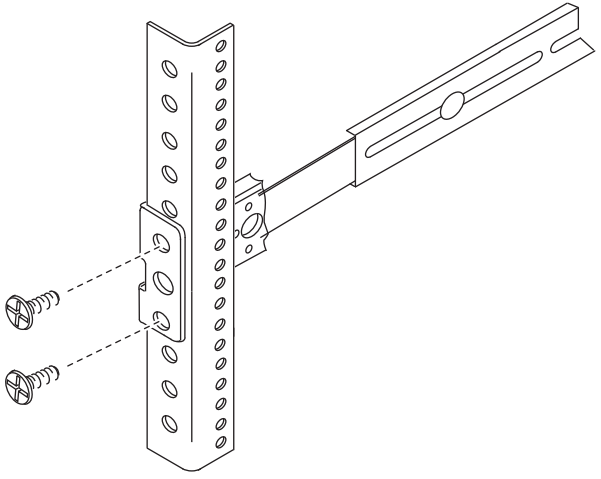
You should have someone helping you hold the slide rails level while you are positioning them in the rack.

Insert the Outer Slide Rail to the Front Rack-Mounting Rail



5. Insert the small-short Phillips-head screws through the round-hole adapter and mounting rail, into the bracket. The small screws that ship with the round hole adapters are 10-32 screws. If the rack holes are a different size, you will need to supply appropriate screws.

Securing the Outer Slide Rail to the Rack-Mounting Rail



6. Adjust the outer slide rail bracket assembly to the rear mounting rail.
7. Secure the rear outer slide rail bracket assembly to the rear mounting rail as you did for the front rack-mounting rail.

8. Repeat this procedure to attach the second outer slide rail on the other side of the rack.

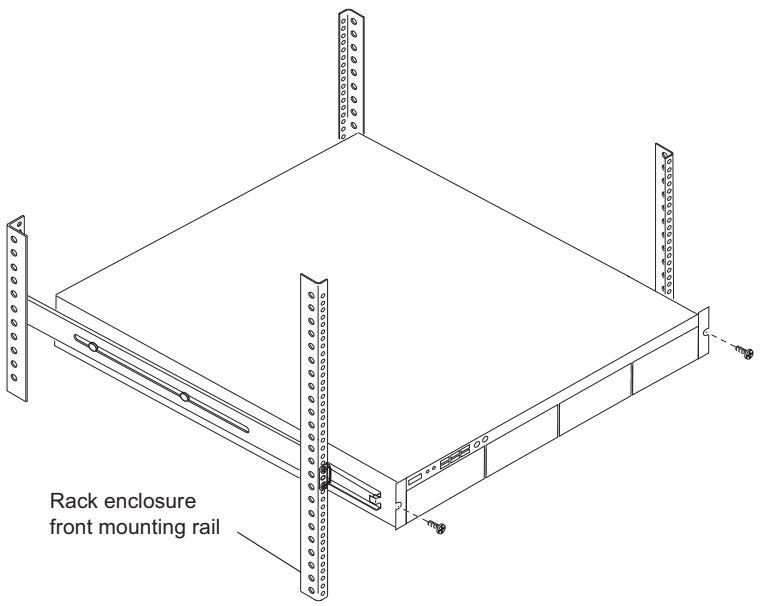
Securing the Avid AS3000 Server in a Rack

You should have someone helping you lift the Avid AS3000 server while you are positioning it into the slide rails.

To secure the server to the rack enclosure:

1. Lift and position the server so that the inner slide rails (secured to the server) are aligned with the outer slide rails secured to the rack.
2. Push the front of the Avid AS3000 server flush against the front mounting rail. The holes in the server front panel align with the holes in the front mounting rail.
3. Do one of the following:
   - For a square hole rack, insert the M6X10 screw into the middle hole of the outer rail kit and tighten. This will anchor the server front panel to the vertical rail.
   - For a round hole rack, use an appropriate screw to attach the server front panel to the vertical rail of the rack. The size will vary depending on your rack hardware.

Front Panel Screws



Installing and Removing the Front Bezel

The optional front bezels provide a snap-on design that allows for maximum airflow through the server chassis.

To install the front bezel:

1. Insert a key into each lock.
2. Turn each key clockwise for a quarter turn.
3. Place the bezel, with the Avid logo on the left, over the handles of the rackmount ears.
4. Lock the bezel in place by turning the keys counterclockwise for a quarter turn.
5. Store the bezel keys in a safe place for future use.

Be careful that the bezel does not contact the power switch because you could power off the system by accident.

To remove the front bezel:

1. Insert a key into each lock.
2. Turn each key clockwise for a quarter turn.
3. Pull the bezel away from the front panel.

Using a KVM to Connect a Keyboard, Monitor, and Mouse

An industry standard USB keyboard, USB mouse and VGA monitor are used to access the AS3000. When installed in a rack with several servers an optional KVM switch can also be used. The keyboard, monitor, and mouse connections use the same ports described in the following procedure. Follow the instruction supplied with your KVM switch. You need to supply KVM cables that are compatible with your KVM switch.

There are only two USB ports on the rear of the server. One of the ports is typically used for the application key. When you purchase your KVM switch make sure it includes a USB splitter cable so that both your keyboard and mouse can plug into the splitter cable and use a single USB port on the server.

To connect a standard keyboard, monitor, and mouse to the AS3000:

1. Install your KVM switch in a suitable slot next to the AS3000 in the rack.

   You can also place the monitor on a shelf, and the keyboard and mouse on a sliding tray in the rack. These items are optional and can be purchased locally or from Avid.

Do not place the monitor on top of the AS3000.

2. Attach the VGA connector on the monitor cable to the 15-pin video port on the back of the AS3000. Secure the connector with the thumbscrews on the connector. For exact locations see “AS3000 Rear Panel” on page 14.
3. Insert the connector on the keyboard and mouse cables into a USB splitter cable.

If you do not have a USB splitter cable, plug your keyboard and mouse cables directly into the USB ports on the rear of the Avid AS3000 server.

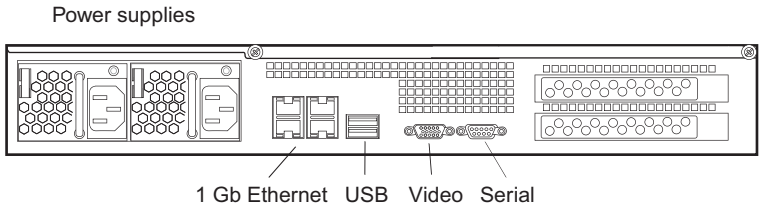
4. Insert the other end of the USB splitter cable into a USB connector on the back of the Avid AS3000 server.

Connecting Power Cords

To connect the power cords to the Avid AS3000 server:

- Plug two power cords into the back of the server and then plug the other ends into power outlets.

AS3000 Power Connections



Avid recommends the use of uninterruptible power supplies, appropriately sized for your AS3000. This provides protection against sudden power surges or losses that could cause you to lose files or experience data corruption. See “Uninterruptible Power Supply (UPS)” on page 68.

Connecting to an Ethernet Network

You can connect the AS3000 to an Ethernet network using the four 1 Gb Ethernet ports on the rear of the enclosure. Please note that some Avid applications require the use of one or both of the PRO/1000 PT ports (Ports 2 and 4). For additional information, see your Avid product documentation.

Avid does not install, configure, or troubleshoot in-house LANs. If you are having trouble with your LAN, consult your Information Services department or your network vendor.

When you are connecting the AS3000 to an Ethernet network, make sure you use only Category 5E, 6, or 6A Ethernet cables. Using other cable types can cause performance problems.

Turning On the Avid AS3000 Server Hardware

To turn on the AS3000 Server hardware:

1. Push the power button at the top left on the front of the your server, see "Avid AS3000 Front Panel and LEDs" on page 12.

On a newly-imaged system, you can log in as Administrator with a password of is-admin.

The server BIOS is configured to automatically power up the system after power is restored to one or both power supplies following the loss of power to both power supplies.

3 Customizing the Server Operating System

This chapter describes Windows operating system parameters that need setting on the Avid AS3000.

Topics in this chapter include:

- Windows Operating System and Settings
- Copying the Product Recovery Image to the USB Flash Drive
- Loading Application Software

Windows Operating System and Settings

Your Avid AS3000 ships with the Windows operating system installed. If you need to re-image the internal drives with the Windows operating system see “Product Recovery” on page 58.

When turning on your Avid AS3000 for the first time the Apply Computer Setup message is displayed for 3 to 5 minutes. Use the information in the following sections to configure the Avid AS3000 with the correct date and time, computer name, and network properties.

On a newly-imaged system you can log on as Administrator with a password of is-admin.

Connect the Network Cables to the Enclosure

The Ethernet hardware senses the presence and speed of a 10, 100 or 1000 Mbps Ethernet network connection. Plug in up to four 1 Gb Ethernet cables into the four network ports on the back of the computer.

Setting the Date, Time, and Time Zone

You need to correctly set the date, time, time zone, and daylight saving time option on each Avid AS3000 enclosure.

To set the date, time, time zone, and daylight saving time option on the Avid AS3000:

1. Click the time in the taskbar. The Date/Time Properties dialog box opens.
2. Click “Change date and time settings.”
3. In the Date and Time tab, click the “Change date and time” button. Set the date and time using the Date & Time tab.
4. Set the date and time.
5. Click OK to close the Date and Time Settings dialog box.
6. Click the Change time zone” button.
7. Set the time zone for the location of the Avid AS3000.
8. Make sure the “Automatically adjust clock for Daylight Saving Time” option is selected if your location observes daylight saving time.
9. Click OK to close the Time Zone Settings dialog box.
10. Click OK to close the Date and Time dialog box.

Specifying a Unique Computer Name

Your Avid AS3000 enclosure has been imaged at Avid with the current operating system configuration and drivers that have been qualified with the Avid AS3000 server. This image creates a unique Host name for the system based on the MAC ID of the system board. If you have changed this default name for the server, you need to remember to rename the server if you ever have to reimage the server. When you re-image the system, the Host system name is reset back to a Host name based on the MAC ID.

If changing the server computer name, you should do this before installing any additional software.

To specify a unique computer name (by which clients identify your Avid AS3000):

1. Right-click the computer icon on the desktop, and select Properties.

   The Control Panel/System dialog box opens.
2. Click Change settings.
3. In the Computer Name tab, click the Change button.
4. Type the new name of the Avid AS3000 in the Computer name text box.
5. (Option) Determine if you need to select the Domain or Workgroup in the “Workgroup” section at the bottom of the dialog box and click Change. Contact your network administrator for assistance.
6. Click OK.

   After a short delay, you are prompted to restart your computer.
7. Click OK.
8. Close all open windows and restart the Avid AS3000 server.

Copying the Product Recovery Image to the USB Flash Drive

Depending on your system, the product recovery image may be included on the system drive. Avid highly recommends you copy this image to the supplied 16 GB flash drive during the initial system setup. For instructions on how to create the product recovery USB flash drive, see “Creating a Product Recovery USB Flash Drive” on page 59.

Loading Application Software

The Avid AS3000 does not have a DVD reader. Software is loaded onto the system using a USB flash drive.

Use the application software flash drive(s) to install your Avid application software such as Interplay Engine or Interplay Capture. Refer to your product documentation for instructions on installing the software.

4 Adding and Replacing Hardware

This chapter provides procedures for adding and replacing components in your Avid AS3000. Do *not* add any hardware if there are any issues with the system. Correct all problems before adding new hardware and making changes to the system. Perform a quick check to verify that the system is in good working order.

- Electrostatic Discharge Precautions
- Replacing System Drives in the AS3000
- Locking and Unlocking a Drive
- Removing and Installing a Hot-swap Hard Drive
- Removing and Installing the System Cover
- Installing and Removing a PCIe Add-in Card
- Removing and Installing the Processor Air Duct
- Installing and Removing Memory
- Replacing a Power Supply

Electrostatic Discharge Precautions

Electrostatic discharge (ESD) can damage disk drives, cards, and other parts. Avid recommends that you perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground (any unpainted metal surface) on your server when handling parts.

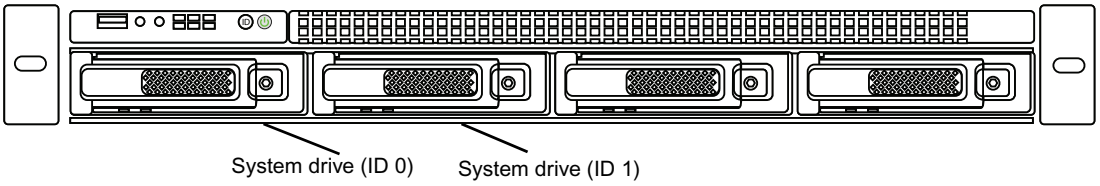
ESD and handling PCIe Cards

Always handle cards carefully. They can be extremely sensitive to ESD. Hold cards only by their edges. After removing a card from its protective wrapper or from the server, place the card component side up on a grounded, static free surface. Use a conductive foam pad if available but not the card wrapper. Do not slide the card over any surface.

Replacing System Drives in the AS3000

There are two system drives installed in the AS3000, as shown in the following illustration.

AS3000 System Drives



The two drives are mirrored and are accessible from the front of the AS3000. If you have a failure on either one of the two system drives you can pull the failed drive out of the server and install a replacement without turning off the server. The Avid AS3000 continues to run properly if one of the two system drives are removed.

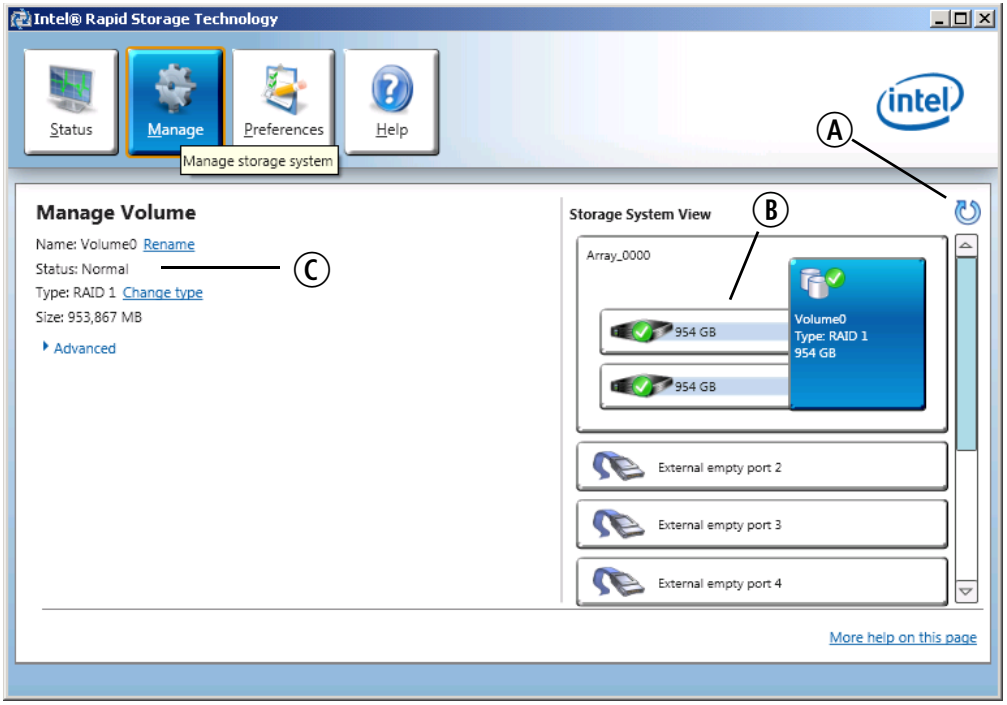
To replace a single failed system drive:

1. Locate the Intel Rapid Storage Technology Application as follows:

   Start>Programs>Intel>Intel Rapid Storage Technology

2. Click to start the application. The following illustration shows the Intel Rapid Storage Technology window.

Intel Rapid Storage Technology Application



A. Run hardware scan button
B. Disk icons
C. Status line

3. Pull the failed drive out of the server and install a replacement without turning off the server. See “Removing and Installing a Hot-swap Hard Drive” on page 41.

   Once the drive is installed, use the Intel Rapid Storage Technology application to initiate the rebuild operation as described in the following steps.

4. Click the Run hardware scan button (identified as A in the above illustration) to refresh the RAID data to the current state.

5. The volume icon has two smaller disk icons attached to it - one for each disk of the RAID set. Perform one of the following operations:

   - If the disk has previously been part of the RAID set, the disk appears as an icon attached to the Volume 0 icon and the application will immediately begin the rebuild. You can monitor in the status line. In this case the status line will display "Rebuilding x% complete”.
   - If the replacement disk has never been part of this RAID set, the disk icons display a list of available disks. The Status line will display "Degraded", and the words "rebuild to another disk" will be underlined. Click on the underlined text.

6. A window opens that offers a choice of drives to add to the array. Click on the one drive that will be added to the RAID set. The rebuild operation begins immediately.

   You can use the Status line to monitor the status of the rebuild. The top of the screen will say Manage Volume, and the status line will say "Rebuilding x% complete.

You can perform other work while the rebuild completes.

To replace both system drives:

1. If both system drives fail, shut down the system, and unplug the power cords.
2. Remove both system drive assemblies as described in “Removing and Installing a Hot-swap Hard Drive” on page 41.
3. Install 1 TB drives into the two drive carriers and insert them into the two system drive slots
4. Replace the power cords and restart the system.
5. Enter the Intel RAID BIOS by pressing CTRL+I when the text MATRIX RAID BIOS appears on the screen.
6. Choose Create the new RAID set. This will create the system drive mirror.
   a. Change RAID type from RAID 0 Stripe to RAID 1 Mirror (volume name and capacity can be left at the defaults).
   b. Select Create RAID, answer yes to the “are you sure” messages.
   c. The RAID set (Volume 0) should be shown as online with the two physical disks (port0 and 1) listed below as array members.
   d. Exit the RAID BIOS and allow the system to restart.
7. Reinstall the System drive image onto Drive 0. See “Reinstalling the Windows Operating System” on page 61 and “Configuring the System Drive Using Windows Setup” on page 63.
8. Reinstall the application software.

Locking and Unlocking a Drive

Avid recommends that you keep the drives locked in the enclosure. The AS3000 ships with several drive keys.

To lock a drive:

1. Locate the drive key that shipped with the AS3000 accessory package.
2. Make sure that the latch is secure on the front of the drive.
3. Insert the key into the drive carrier lock and turn it clockwise to lock the drive in place.

Locking a Drive

A. Drive lock key

4. Store the key in a secure location for future use.

To unlock a drive:

- Insert the key into the drive carrier lock and turn it counter-clockwise to unlock the drive.

Removing and Installing a Hot-swap Hard Drive

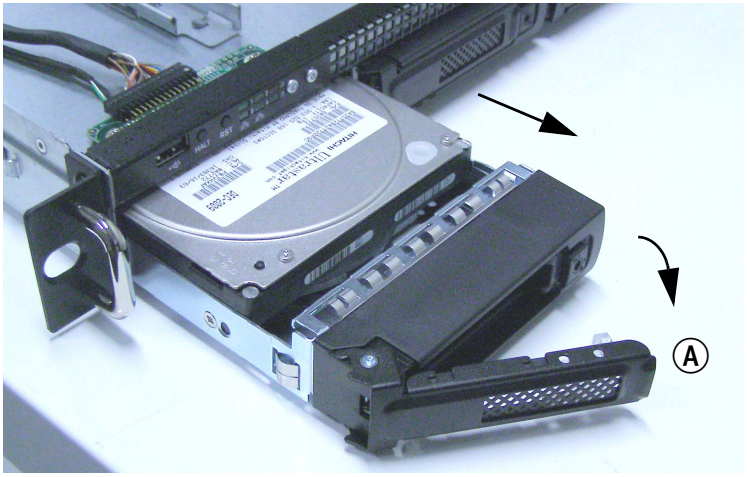
This section describes a generic procedure for installing or replacing hot-swap hard drives on the AS3000. For additional information, see “Replacing System Drives in the AS3000” on page 38.

To removing and install a hot-swap hard disk drive:

1. If necessary, remove the front bezel. See “Installing and Removing the Front Bezel” on page 29.
2. Unlock the drive. See “Locking and Unlocking a Drive” on page 40.
3. Press in on the button on the latch at the front of the hard drive carrier. See Letter A in the figure below.

4. Pull out on the black lever and slide the carrier from the server system.

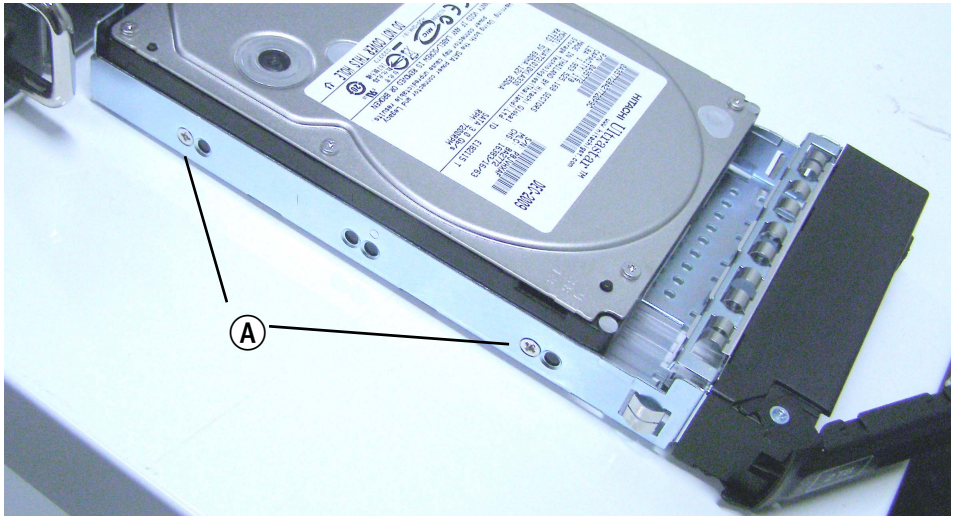
Removing the Hot-swap Drive Carrier from the Server System



A. Latch button and black lever

5. If you are installing a drive in an empty drive carrier, proceed to Step 8.
6. Remove the four screws that attach the previously installed hard drive to the drive carrier.

Removing the Screws



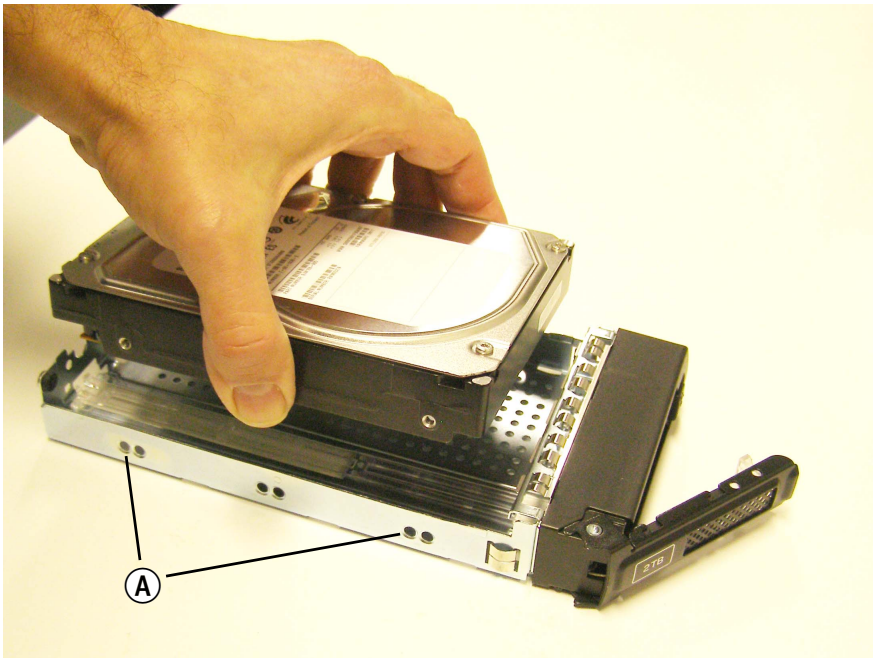
A. Screws

7. Remove the old drive from the drive carrier and store the drive in an anti-static bag.

8. Remove the new hard drive from its wrapper and place it on an antistatic surface.
9. With the label side up, position the connector end of the drive so that it is facing the rear of the drive carrier.
10. Align the holes in the drive to the four holes in the side of the drive carrier and attach it to the carrier with the four screws. Make sure that the SATA connector is not blocked by the metal tray.

If you are installing a drive for the first time, use the screws that were included in the AS3000 accessory kit. See "Avid AS3000 Server" on page 18.

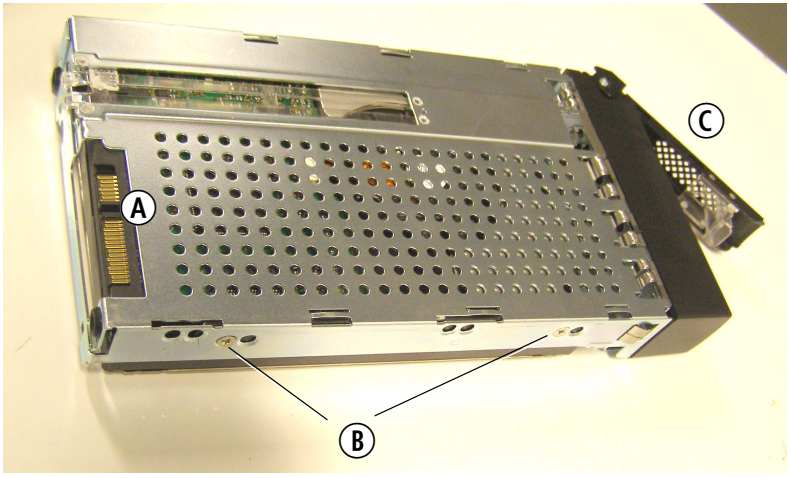
Installing Hard Drive into Carrier



A. Attach two screws on each side of the carrier.

The following illustration shows the connectors on the bottom of the drive carrier.

Bottom View of Drive Attached to Drive Carrier



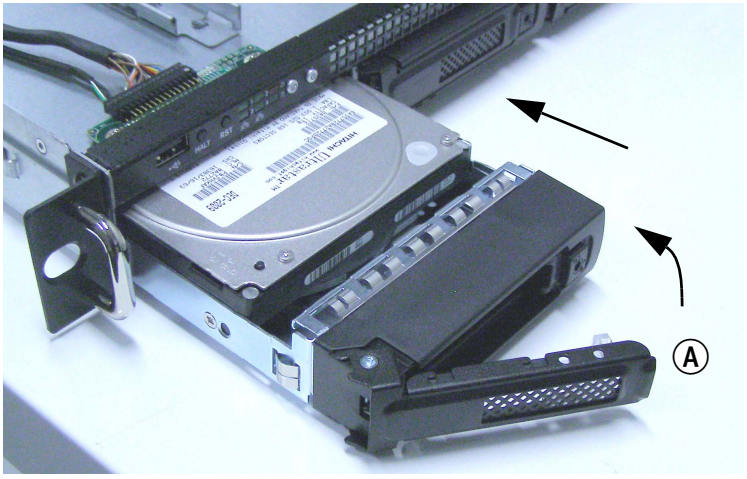
A. Drive connector
B. Screws
C. Latch

11. With the black lever in the fully open position, slide the drive assembly into the server system. The latch at the front of the drive carrier must be on the right. Do not push on the black drive carrier lever until the lever begins to close by itself.

Do not force a drive into a slot. If you are having problems installing a drive, check to make sure it is level and flat as you insert it into the server, that the drive carrier latch is open and at a 45 degree angle to the drive carrier, and that the LEDs are on the bottom of the drive carrier.

12. When the black drive carrier lever begins to close by itself, push on it to lock the drive assembly into place. This seats the drive in the AS3000. You'll hear a click when the drive is fully seated and the lever latches in place.

Install Drive Assembly into the Server System



A. Latch button and black lever

13. Use a drive lock key to lock the drive in place. See "Locking and Unlocking a Drive" on page 40.
14. Repeat the steps for any additional drives that must be added,
15. Plug all peripheral devices and the AC power cables into the server.

Removing and Installing the System Cover

The server system must be operated with the chassis cover in place to ensure proper cooling. You will need to remove the top cover to add or replace components inside of the server. Before removing the chassis cover, power down the server and unplug all peripheral devices and the AC power cables.

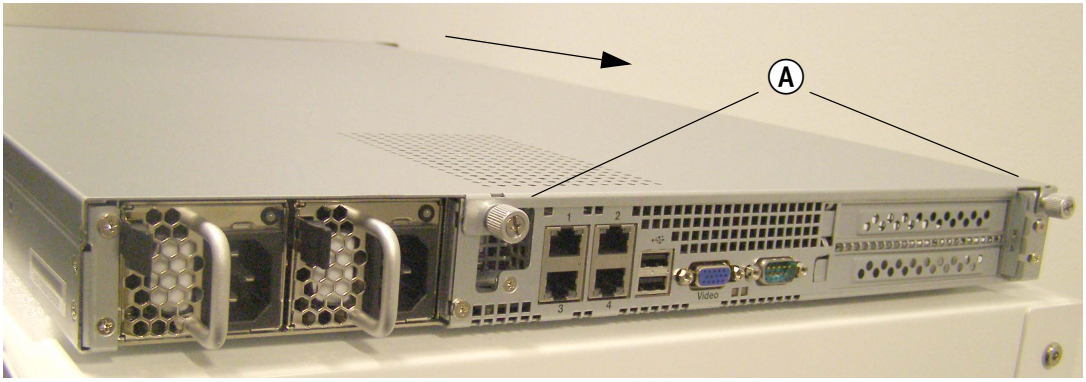
A nonskid surface or a stop behind the server system may be needed to prevent the server system from sliding on your work surface.

To remove the system cover:

1. Observe the safety precautions described in "Electrostatic Discharge Precautions" on page 37 and "Safety and Regulatory Information" on page 70.
2. Turn off all peripheral devices connected to the server. Turn off the server.

3. Disconnect the AC power cords.
4. Unscrew the thumbscrews at the back of the unit until they are loose.
5. Pull the thumbscrews backwards and slide the cover until the tabs disengage from the front of the unit.

Removing the Server System Cover



A. Thumbscrews

6. Remove the cover and set in a safe place.

To install the server system cover:

1. Place the cover over the server system so that the side edges of the cover sit just outside the server system sidewalls.
2. Slide the cover forward until it clicks into place. As necessary, press down on the tabs near the front of the cover so that they slide under the top front of the server.
3. Tighten the rear thumbscrews.
4. Reconnect all peripheral devices and the AC power cords.

Installing and Removing a PCIe Add-in Card

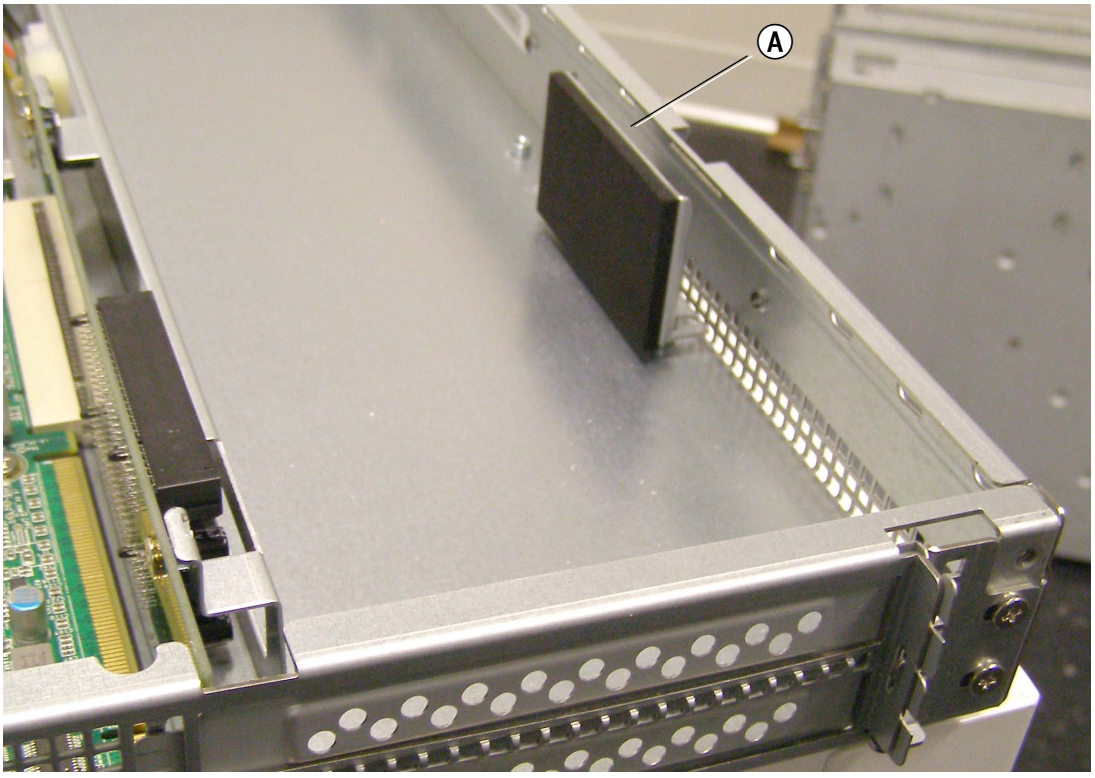
This section describes how to install and remove a PCIe add-in card.

To install a PCIe add-in card:

1. Observe the safety precautions described in “Electrostatic Discharge Precautions” on page 37 and “Safety and Regulatory Information” on page 70.
2. Power down the server and unplug all peripheral devices and the AC power cables.

3. Remove the server system cover. For instructions, see “Removing and Installing the System Cover” on page 45.
4. Disconnect any cables attached to any add-in cards.
5. If the PCIe card is a full-height card, remove the lateral movement support by removing the two screws connecting it to the chassis. If the card is a half-height card, you can leave the lateral movement support in place.

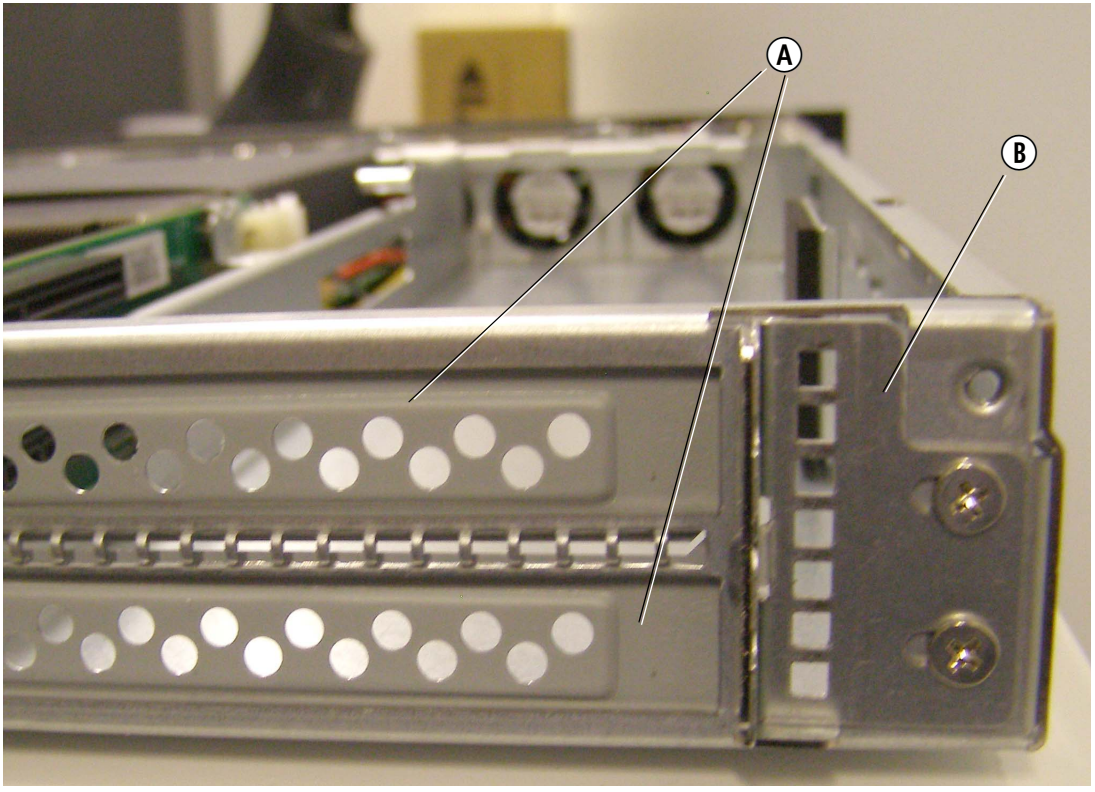
Removing the Lateral Movement Support



A. Lateral movement support

6. Remove the bezel retainer by removing the two screws and removing the retainer.

Removing the Bezel Retainer and Filler Panels



A. Filler panels
B. Bezel retainer

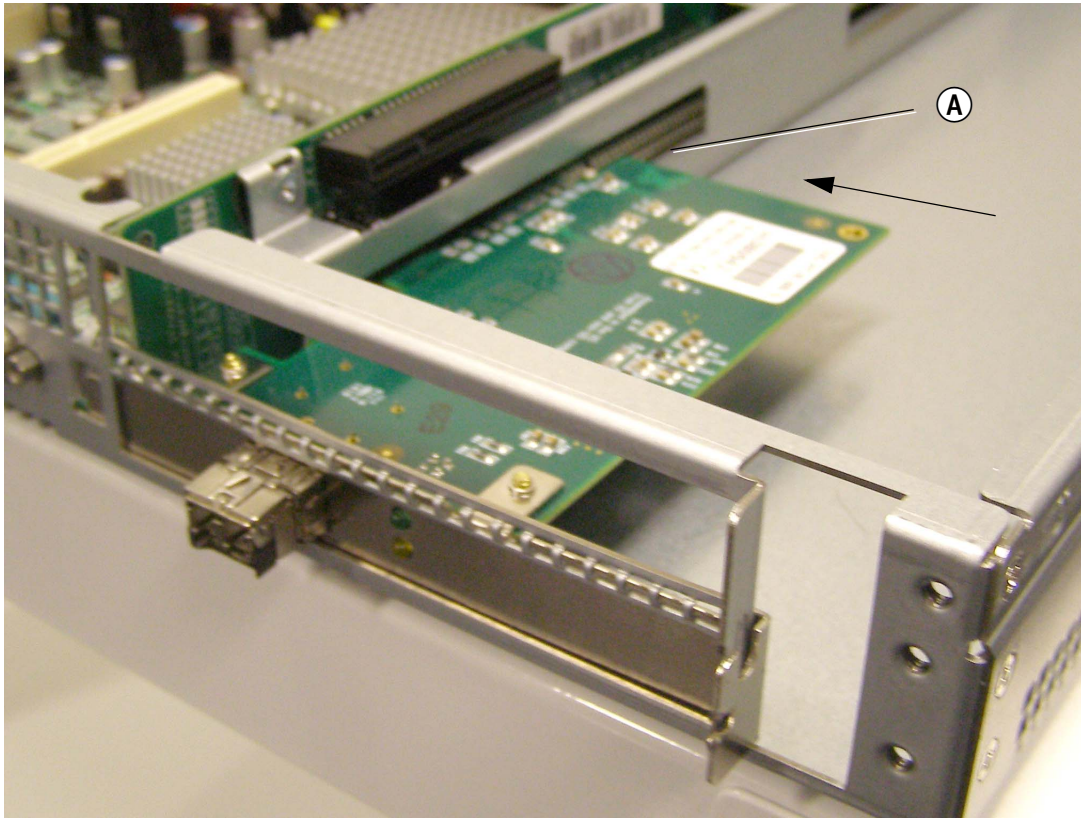
7. Remove both filler panels.

When adding the first PCIe card, Avid recommends that you add it to the bottom slot unless the Avid system requires the card to be in a designated slot. See your product specific documentation for details.

8. Insert the card so that it fits into the slot and replaces the filler panel. Be sure to seat the tab at the bottom of the card into the slot on the left side of the bezel. Be careful not to remove the conductive gasket.

The following illustration shows the card installed in the bottom slot.

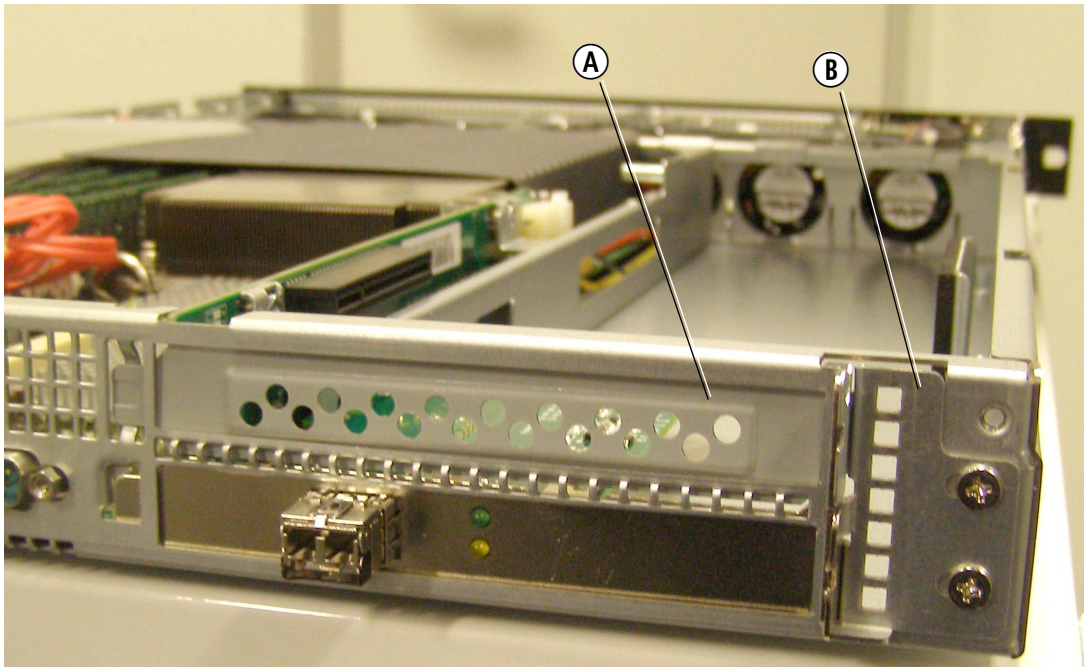
Adding a Card to the Bottom Slot



A. Bottom slot

9. Replace the top filler panel and attach the bezel retainer with two screws as shown in the following illustration.

Replacing the Top Filler Panel and the Bezel Retainer



A. Top filler panel
B. Bezel retainer

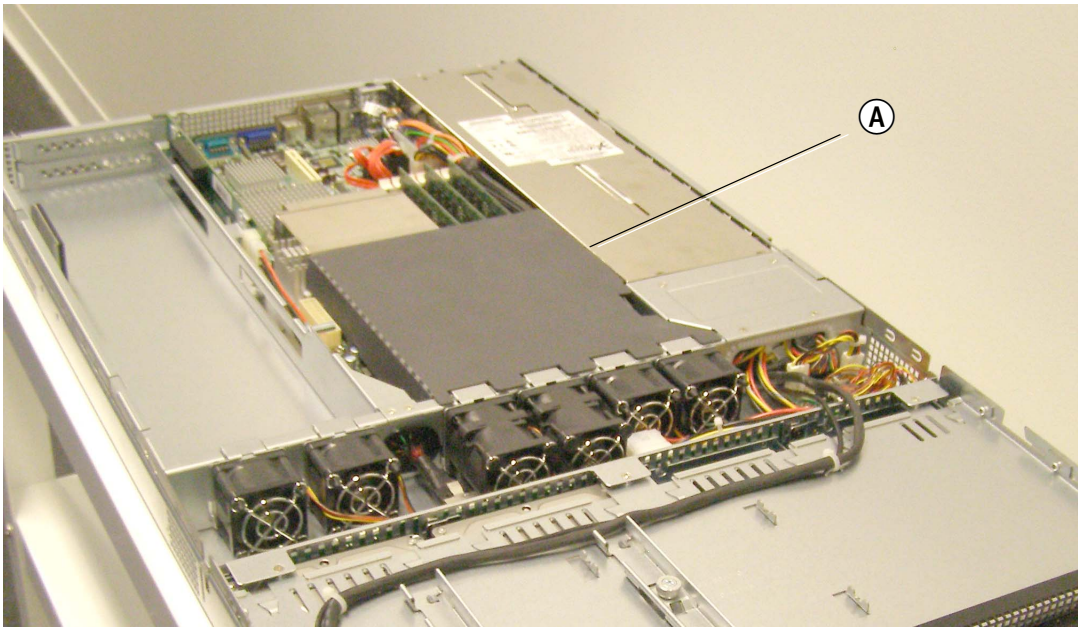
Make sure that any empty add-in card slots have filler panels installed.

10. If you had removed the lateral movement support, replace the support by reconnecting the two screws that hold it to the chassis.
11. Replace the system cover. See "Removing and Installing the System Cover" on page 45.
12. Reconnect all peripheral devices and the AC power cords into the server.

Removing and Installing the Processor Air Duct

The following illustration shows the processor air duct. You must remove the processor air duct in order to add or remove memory.

Processor Air Duct



A. Processor air duct

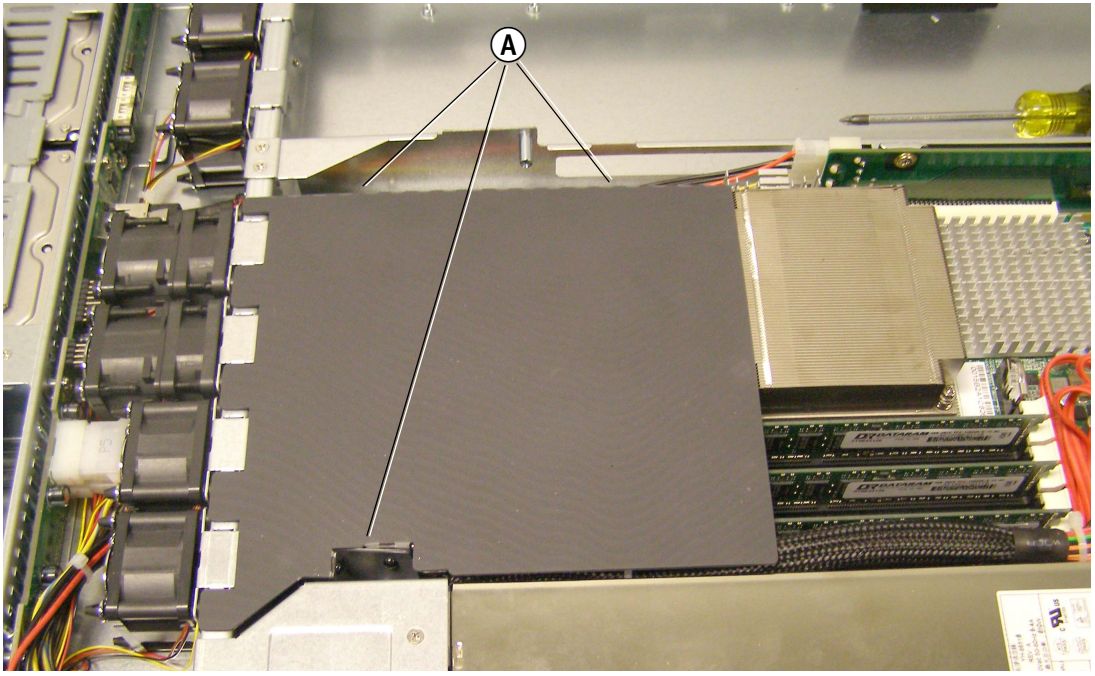
Always operate your server system with the processor air duct in place. The air duct is required for proper airflow within the server system.

To remove the processor air duct:

1. Observe the safety precautions described in “Electrostatic Discharge Precautions” on page 37 and “Safety and Regulatory Information” on page 70.
2. Power down the server and unplug all peripheral devices and the AC power cables.
3. Remove the server system cover. For instructions, see “Removing and Installing the System Cover” on page 45.

4. Loosen the three screws holding the processor air duct tabs to the chassis.

Removing the Processor Air Duct



A. Processor air duct screws

5. (Option) Leave the completely loosened screws sitting on the tabs. Then you can lift the processor air duct and the screws out of the chassis at the same time.
6. Carefully lift the processor air duct from the chassis.

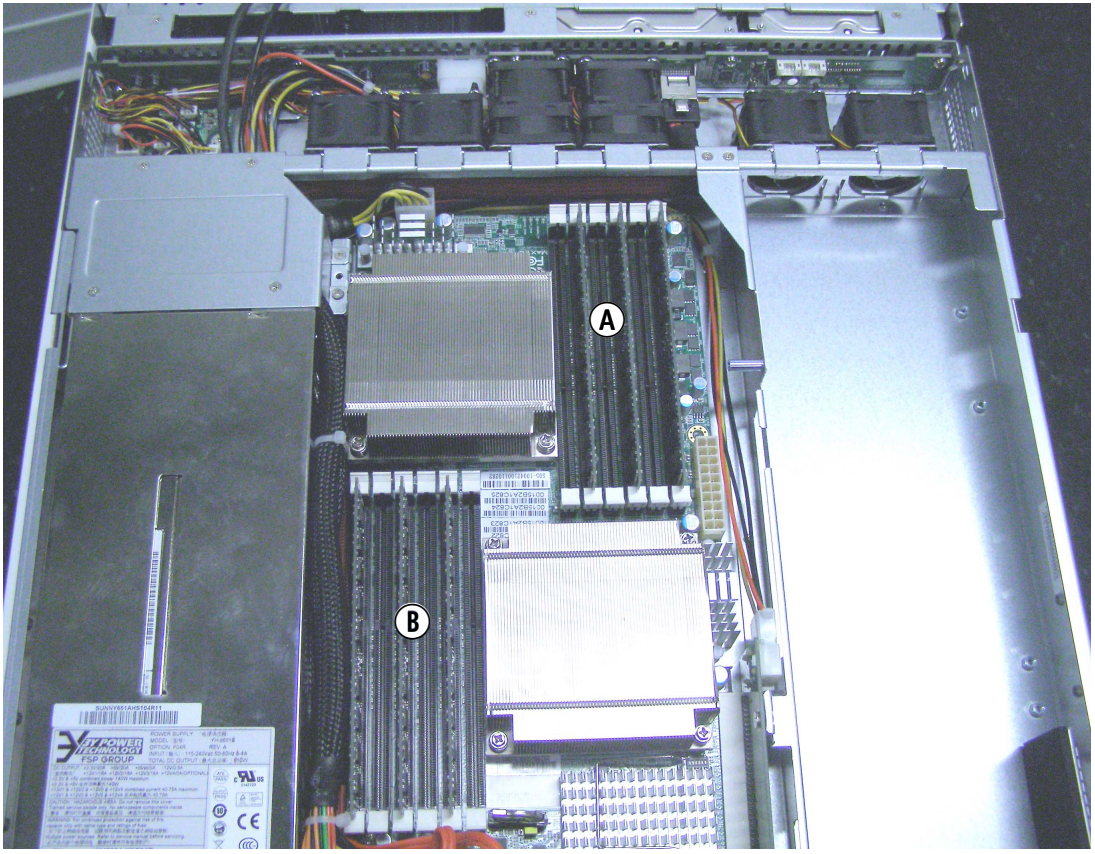
To replace the processor air duct:

1. Carefully insert the processor air duct into position.
2. Insert the three screws into the holes in the processor air duct tabs
3. Tighten the three screws loosely while adjusting the processor air duct.
4. Once the air duct is correctly seated, finish tightening all three screws.
5. Replace the system cover. See “Removing and Installing the System Cover” on page 45.
6. Reconnect all peripheral devices and the AC power cords into the server.

Installing and Removing Memory

The following illustration shows the AS3000 memory locations for a two processor system.

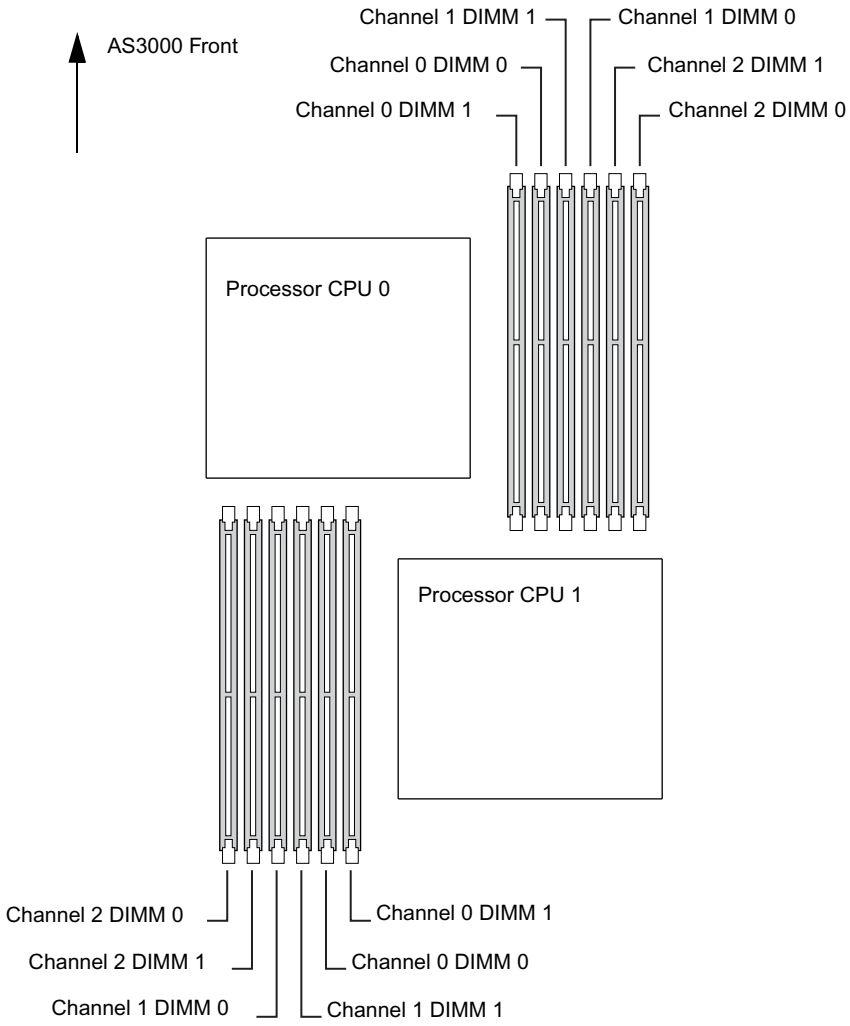
Processors and Corresponding Memory



A. Memory for Processor CPU 0
B. Memory for Processor CPU 1

The AS3000 ships from the factory with three 2 GB DDR-3 DIMMs per processor.

The AS3000 has three memory channels per processor and two DIMMs per memory channel.The following illustration shows the AS3000 channel and DIMM locations. Channels on Processor CPU 0 increment from left to right and channels on Processor CPU 1 increment from right to left.



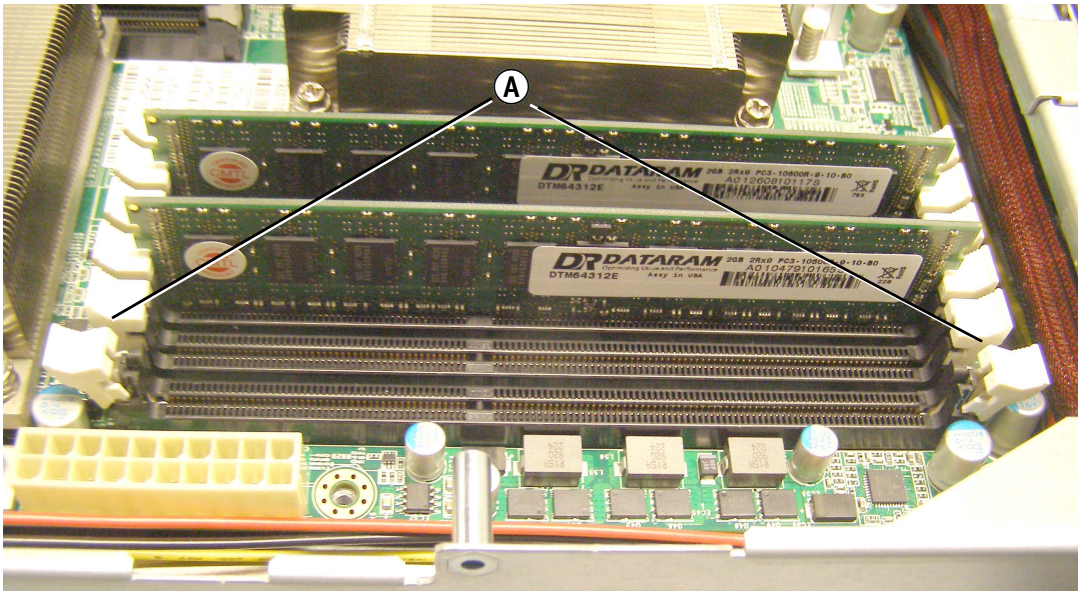
Avid recommends the following:

- Install equal sized DIMMs per channel.
- Use only registered DDR-3 memory as recommended by Avid for applications that require additional memory.
- If you are only using three DIMMs, install one per channel in the DIMM 0 position of each channel.

To install DIMMs:

1. Observe the safety precautions described in “Electrostatic Discharge Precautions” on page 37 and “Safety and Regulatory Information” on page 70.
2. Power down the server and unplug all peripheral devices and the AC power cables.
3. Remove the server system cover. See “Removing and Installing the System Cover” on page 45.
4. Remove the processor air duct. See “Removing and Installing the Processor Air Duct” on page 51.
5. Locate the DIMM sockets as shown in the previous illustration.
6. Make sure the retaining clips at either end of the DIMM socket(s) are pushed outward to the open position as shown in the following illustration.

DIMM Socket Retaining Clips



A. DIMM socket retaining clips

7. Holding the DIMM by the edges, remove it from its anti-static package.
8. Position the DIMM above the socket. Align the notch on the bottom edge of the DIMM with the key in the DIMM socket.
9. Insert the bottom edge of the DIMM into the socket.
10. When the DIMM is inserted, push down on the top edge of the DIMM until the retaining clips snap into place. Make sure the clips are firmly in place.

11. Replace the processor air duct and system cover. See “Removing and Installing the Processor Air Duct” on page 51 and “Removing and Installing the System Cover” on page 45.
12. Reconnect all peripheral devices and the AC power cords into the server.

To remove DIMMs:

1. Observe the safety precautions described in “Electrostatic Discharge Precautions” on page 37 and “Safety and Regulatory Information” on page 70.
2. Power down the server and unplug all peripheral devices and the AC power cables.
3. Remove the server system cover. See “Removing and Installing the System Cover” on page 45.
4. Remove the processor air duct. See “Removing and Installing the Processor Air Duct” on page 51.
5. Gently spread the DIMM socket retaining clips at each end of the socket. The DIMM lifts from the socket.
6. Holding the DIMM by the edges, lift it from the socket, and store it in an anti-static package.
7. Replace the processor air duct and system cover. See “Removing and Installing the Processor Air Duct” on page 51 and “Removing and Installing the System Cover” on page 45.
8. Reconnect all peripheral devices and the AC power cords into the server.

Replacing a Power Supply

The AS3000 is designed to run with two operating power supplies. A power supply can be replaced if it fails. If a power supply fails, the LED on the power supply and the front panel LED turn red and a beeping alarm sounds. The alarm is not configurable.

A power supply is only hot-swappable if the other power supply is operational. If you only have one power supply working, before removing or replacing that power supply, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the server by powering it off from the Start menu. Then unplug the AC power cord from the system or AC outlet.

Avid recommends the use of uninterruptible power supplies, appropriately sized for your AS3000. This provides protection against sudden power surges or losses that could cause you to lose files or experience data corruption. See “Uninterruptible Power Supply (UPS)” on page 68.

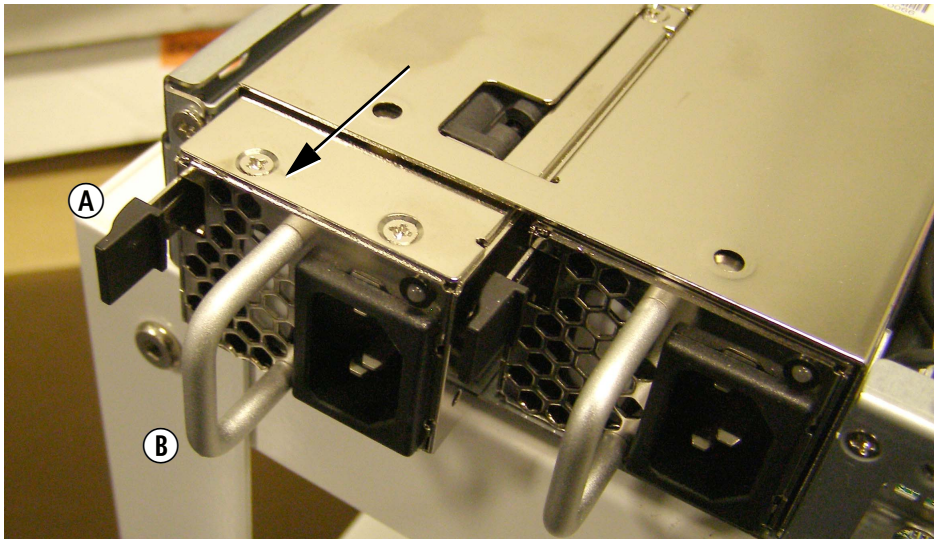
To replace a power supply:

1. Observe the safety precautions described in “Electrostatic Discharge Precautions” on page 37 and “Safety and Regulatory Information” on page 70.
2. Power down the server and unplug all peripheral devices and the AC power cables.

The power supply must be unplugged before you remove it.

3. Push the latch towards the handle and remove the power supply by pulling on the handle.

Removing a Power Supply



A. Latch
B. Handle

4. Insert the replacement power supply module into the power supply cage until it clicks into place.
5. Reconnect all peripheral devices and the AC power cords into the server. Note that the AS3000 will power up without having to turn on the power switch.

5 Product Recovery

This chapter describes the procedures to recover the system image originally installed on your AS3000 system drive by reinstalling the Windows operating system and Avid specific additions and changes.

This chapter covers the following topics:

- Locating the recovery image
- If necessary, copy the recovery image to the 16 GB USB flash drive that ships with your AS3000
- Instructions on how to use the recovery image to restore the Windows operating system and hardware drivers that ship with your AS3000

The recovery procedure restores only the Windows operating system and the hardware drivers. It does not restore the Avid application software. The Avid software must be reinstalled separately, after the operating system recovery is complete. The version number of the image can be found in the `C:\IMAGE.TXT` file on the root directory of the system drive.

You might need to reinstall the Windows operating system on your server if you are directed to do so by Avid Customer Support or if you are initializing a new drive. Perform an installation to the *entire* system (C:, D:, and E:). This replaces all the data from all the available partitions on your system drive. You can perform this operation if you are initializing your system drive.

After reimaging the server, the Administrator password is set to is-admin.

Locating the Recovery Image

The location of your recovery image depends on the Windows OS and the Avid application.

- On Windows 7 systems, the recovery image is on the 16 GB flash drive that ships with the AS3000 server. Store the flash drive in a safe place.
- For ISIS systems, see the setup guide for your ISIS product.
- For all other systems, the recovery image ships on the D: partition of the system drive. On these systems, a tool for copying the image to a USB Flash drive is located in the following folder: C:\Avid_Recovery_Tool.

For systems that ship with the recovery image on the D: partition, Avid highly recommends you copy the image to the 16 GB USB flash drive provided with your AS3000.

When you perform a full product recovery of the Avid AS3000 system drive, you lose the product recovery image and data on the D: partition of the system drive.

Creating a Product Recovery USB Flash Drive

Your order contains one blank 16 GB USB flash drive for each server to be used for creating your recovery drive. Use the flash drive to create your recovery drive except in the case of the Windows 7 servers, whose flash drives have already been programmed.

The following procedure describes how to create the product recovery USB flash drive by copying the image from the D: drive. Once you have created the bootable USB flash drive using the Product Recovery tool, you will be able to re-install the operating system and drivers as it was shipped from Avid.

When you perform a full product recovery of the Avid AS3000 system drive using the product recovery USB flash drive, you lose the product recovery image on the D: partition.

The following procedure assumes that you are going to use the tool located in the following folder on the AS3000: C:\Avid_Recovery_Tool. Check your Avid product documentation for details on the location of the tool.

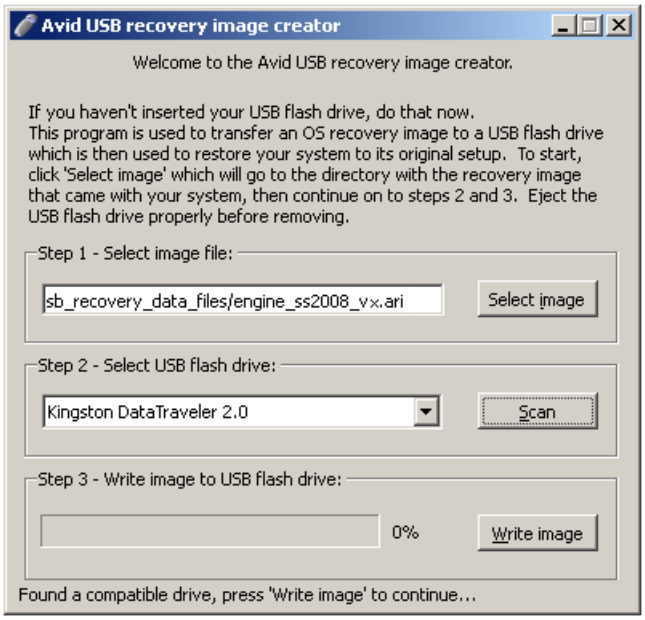
To create a product recovery USB flash drive:

1. Navigate to the following folder on the AS3000:

   C:\Avid_Recovery_Tool

2. Locate the 16 GB USB flash drive Avid provided with the Avid AS3000 and insert it into the front USB port.
3. Double-click the AvidRecoveryImageTool.exe file.

   The Avid USB recovery image creator window opens.


Avid USB recovery image creator
Welcome to the Avid USB recovery image creator.
If you haven't inserted your USB flash drive, do that now.
This program is used to transfer an OS recovery image to a USB flash drive which is then used to restore your system to its original setup. To start, click 'Select image' which will go to the directory with the recovery image that came with your system, then continue on to steps 2 and 3. Eject the USB flash drive properly before removing.
Step 1 - Select image file:
sb_recovery_data_files/engine_ss2008_vx.ari
Select image
Step 2 - Select USB flash drive:
Kingston DataTraveler 2.0
Scan
Step 3 - Write image to USB flash drive:
0%
Write image
Found a compatible drive, press 'Write image' to continue...

4. Click Select Image and navigate to the product recovery image on D: partition of the Avid AS3000 system drive (if the tool's browser opens to the E: partition by default, you need to browse to the D: partition to locate the .ari file).
5. Select the .ari file.

   The Scan button becomes active when you select the image file. The "Select USB flash drive" menu lists USB devices that are installed and capable of accepting the image file. If the inserted USB flash drive does not appear in the drop down menu, verify the capacity of the USB flash drive.
6. Click Scan.
7. Select the USB flash drive from the "Select USB flash drive" menu.

   The Write image button becomes active when you select the USB flash drive.
8. Click Write image.

Creating the product recovery image on the USB flash drive can take 18 to 45 minutes depending on the capabilities of the USB flash drive.

9. Click OK to acknowledge the warning about losing all previous data on the USB flash drive.

   The Write image button becomes a Cancel button when the image is being created. If you cancel the write image process, the process starts over from the beginning on the next undertaking.

10. Click OK when the process is completed.
11. The USB flash drive appears in the taskbar as an icon. Remove the USB flash drive as follows:

    a. Double-click the USB icon in the taskbar. A pop-up menu appears with a list of attached USB devices.

    a. Select the USB flash drive with the product recovery image.

    b. Click Stop.

    c. Click OK to remove the selected USB device.

    d. Remove the USB flash drive from the AS3000.

12. Label the flash drive and store it in a safe place for future use.

Reinstalling the Windows Operating System

This procedure applies to all recovery images stored on a USB flash drive.

To reinstall the Windows operating system from the Avid Product Recovery flash drive:

1. Locate the 16 GB USB flash drive with the Avid AS3000 image.
2. If necessary, stop your Avid application software. See your product documentation for details.
3. Insert USB flash drive into the USB port in the system.

Its important to insert the flash drive before you reboot because you must enter the BIOS with USB flash drive plugged-in to set correct drive boot order.

4. Restart the system. Either use the Start menu or press the Reset button on the front of the enclosure.

If you use the Start menu the command is different depending on the Windows operating system. For example, on Windows 2008 Server, the command is Start > Logoff > Shutdown.

   The Windows operating system restarts.

5. Press the **Delete** key several times during startup until you see “Entering Setup.”

6. Set the USB Drive to boot first. Navigate to the Boot tab > Hard Disk Drives > 1st Drive and select “USB Kingston DataT.” The 2nd Drive setting changes to the “RAID: Intel Volume.”

Depending on the manufacturer of the USB flash drive, this USB selection in the BIOS might change. The AS3000 includes a Kingston USB flash drive. This might not be the manufacturer of the USB flash drive in future releases.

7. Press **F10** to Exit and Save your changes.

   The system continues to start from the USB flash drive.

   Wait until two windows appear, click on the blue window and select one of the available options:

   - Recover only the OS partition.
   - Recover the entire system disk.

The product recovery program only lists the C: and D: partitions in the window but, the C:, D:, and E: partitions are imaged. The image on the E: partition is removed.

   - Exit without doing a recovery.

8. At the prompt, type the number of the operation you want to perform:
   - If you type `1` or `2`, a warning screen opens, informing you that you are about to recover the entire system disk. Continue with step 9.
   - If you type `3`, the recovery quits to the Main menu. You need to type `3` again to get to command window. Press `Ctrl+Alt+Delete` to quit in any of these windows.
9. A yellow screen appears type **Y**.
10. A red screen appears type **Y**.

    The reimaging takes 20 to 30 minutes.

Do not remove the USB flash drive while performing the product recovery. If you remove the USB flash drive an error is displayed stating it cannot write the Ghosterr.txt file. If the USB flash drive was removed, you cannot continue the process by re-installing the USB flash drive. You would have to start the recovery process from the beginning.

11. A gray screen prompts you to reboot. Type **R**, and quickly remove the USB flash drive from the system.

    Configure the operating system as described in the following section. The Apply Computer Setup message is displayed for 3 to 5 minutes.

Configuring the System Drive Using Windows Setup

After you recover the Windows operating system, several system parameters are set including a system Disk Check. The system restarts, and you are prompted to enter the Windows activation key. This number is on the Windows Certificate located on the right-side of the server top cover. You need this Windows certificate number in the following procedure.

To set up the Windows operating system:

1. (If removed) Reconnect all the network Ethernet cables.
2. When the Product Key screen opens, type the Product Key from the Certificate of Authenticity in the Product Key text box. The certificate is on the top of the server.

The Product Key Authenticity is verified with Microsoft through an Internet connection. If you do not have the Avid AS3000 connected to the internet, you need to phone in your Product Key and get an Authenticity number back from Microsoft. The phone number appears on the screen.

   The Windows Setup utility starts, and the a dialog box opens showing the License Agreement screen. The Setup utility will be specific to the version of Windows you are using.

3. Select “I accept the agreement.”
4. Click Next.

   The server restarts (potentially more than once).

5. Log on as **`Administrator`** and **`is-admin`** as the password.
6. After your system restarts for the last time, customize the system and local settings. See the Windows documentation for more information.
   - If you are outside the United States, customize the system and local settings, and the keyboard for your location.
   - You might want to create a new *system administrator name* and password.
   - Company Name and Organization.
   - Date and Time Settings.
   - Network Workgroup and Computer Domain settings.

When the operating system is restored in the server, a unique computer host name is created based on the MAC ID of the system board. Each time you re-image your server, the same name will be generated. If you have changed the computer host name of your server, you need to reapply your computer host name again.

7. Start the system and install your Avid application software, see “Loading Application Software” on page 36.

5 Product Recovery

6 Specifications and Notices

This section provides information on the dimensions and weight, the environmental, the electrical, and the power cord specifications for the Avid AS3000 server. It also recommends the use of an Uninterruptible Power Supply and supported network cabling.

Dimensions and Weight

The following table lists the dimensions and weight.

Component Dimensions and Weight

Component	Height	Width	Depth	Weight
Avid AS3000 server	1.75 in (44.4 mm)	19 in (482.6 mm)	27 in (685.8 mm)	40.0 lb (18.1 kg) with drives installed

Environment

The following table lists the environmental specifications.

Environmental Specifications

Component	Operating Temperature	Operating Humidity	Storage Temperature
Avid AS3000 server	32°F to 104°F (0°C to 40°C)	5% to 95% (at 38°C) non-condensing	–4°F to 140°F (–20°C to 60°C)

Electrical

You should consider installing a separately derived power system for your Avid server hardware. This ensures that you can control the hardware grounding, with all grounds brought to a single point, and that uncontrolled equipment, such as coffee makers or floor polishers, cannot be plugged into the same power source as the Avid AS3000 hardware.

If you do not create a separately derived power system, you need to make sure the power outlets you use are from the same distribution panel. This helps prevent the occurrence of ground loops that can be caused by plugging equipment into power sources with different ground potentials.

You should have all the electrical work at your site done by a licensed electrician. All the electrical changes must meet country, state, and local electrical codes.

As you choose the location for your Avid server hardware, keep these electrical requirements in mind:

- Make sure there is adequate, dedicated power for the UPSs connected to the servers. See “Uninterruptible Power Supply (UPS)” on page 68.
- Make sure your location is away from major electrical equipment such as motors, air conditioners, or elevators.
- Make sure the location is not subject to electrostatic buildup.
- Plug only your Avid hardware into the power strips. Do not plug in coffee makers, radios, lights, or other non-Avid devices.

The following table lists the electrical specifications.

Electrical Specifications

Component	Voltage	Frequency	Watts (Max. U.S.)	BTUs
Avid AS3000 server	100 to 240 Vac Two hot-swap redundant AC power supplies	50 to 60 Hz	650 W	3000

Uninterruptible Power Supply (UPS)

Avid recommends the use of UPSs, appropriately sized for your Avid server hardware, or conditioned power in your computer room environment. This provides protection against sudden power surges or losses that could cause you to lose files or experience data corruption.

Make sure there is adequate, dedicated power for the UPSs. If you run more than one power line because you have more than one UPS, you must make sure the power lines come from the same distribution panel.

You should have all the electrical work at your site done by a licensed electrician. The electrical changes must meet country, state, and local electrical codes.

The Avid AS3000 server supports UPS devices that are connected using network connections, USB connections, and serial connections. Install the software from the UPS manufacturer for advanced shutdown behavior, calibrate the UPS device. These software packages also allow for a connected Windows server to send alerts to other Windows servers to perform actions.

If your Avid AS3000 server is connected to a network, network policy settings might also prevent you from completing this procedure. Make sure there is adequate power and the correct receptacle type for each hardware component, the rack power strips, and the UPSes. Do not use extension cords to plug in any of the hardware components.

Supported Cabling

Avid supports the following cable types for connecting an Avid AS3000 server system. For cabling information for specific products, see your Avid product documentation.

If you need to run your cable greater distances, call Avid Customer Support for supported cable and accessory information.

Supported Cables

Cable Connection Type	Function	Connector Style and Maximum Cable Length
Ethernet network cable, CAT5e, CAT6, or CAT6a	Connects: Ethernet Avid clients and servers	RJ45 connector 100 Meters; If using CAT5e the cable must be rated for 350 MHz for maximum length. The minimum GigE cable length for Avid network products is 6 feet or 2 meter.
Optical cables	Connects: Optional Myricom 10-Gb Ethernet card to 10-Gb switch port.	The maximum length for optical Ethernet cables is limited by the core diameter (measured in microns) and modal bandwidth (in units of MHz*km). **MMF 62.5 micron cable Modal Bandwidth of:** (Overfilled Launch (OFL) Bandwidth, typical of OM1 cable) • 160 MHz*km at 26 meters • 200 MHz*km at 33 meters **MMF 50 micron cable Modal Bandwidth of:** • 500 MHz*km at 82 meters (Overfilled Launch Bandwidth, typical of OM2 cable) • 2000 MHz*km at 300 meters (Effective Modal Bandwidth, typical of OM3 cable)

When connecting to the 10 Gb port, it is important to follow two rules:
– Ensure that the cable has the required modal bandwidth for the distance of the run.
– Make sure that all multimode cables between a switch port and the other end of the cable run are of the same diameter (for example, 50/125 um or 62.5/125 um).

A Safety and Regulatory Information

This document contains safety and regulatory information for Avid hardware.

- Warnings and Cautions
- FCC Notice
- Canadian Notice (Avis Canadien)
- Rack-mount Requirements
- LED Safety Notices
- European Union Declaration of Conformity
- Disposal of Waste Equipment by Users in the European Union
- Argentina Conformity
- Australia and New Zealand EMC Regulations
- Japan EMC Regulations
- Korean EMC Regulations
- Taiwan EMC Regulations

Warnings and Cautions

Never install equipment if it appears damaged.

Disconnect the power cord before servicing unit.

Only perform the services explicitly described in this document. For services or procedures not outlined in this document, speak with authorized Avid service personnel.

Follow all warnings and cautions in the procedures.

Operate the device within its marked electrical ratings and product usage instructions.

If you need to replace a battery in an Avid hardware unit, be sure to use the correct battery type. There might be a risk of explosion if a battery is replaced by an incorrect type. Dispose of used batteries according to the manufacturer's instructions.

(Hebrew Warnings and Cautions)

הנחיות זהירות

אין להתקין ציוד הנראה פגום.

יש לנתק את כבל החשמל לפני הטיפול ביחידה.

יש לבצע אך ורק את הטיפולים המתוארים במפורש במסמך זה. עבור טיפולים או הליכים שאינם מתוארים במסמך זה, יש לפנות לאיש שירות מוסמך ומורשה של Avid.

בביצוע ההליכים, יש להישמע לכל הנחיות הזהירות.

יש להפעיל את המכשיר במסגרת הדירוגים החשמליים והנחיות השימוש במוצר.

אם יש צורך להחליף את הסוללה ביחידת חומרה של Avid, יש להקפיד להשתמש בסוג הסוללה הנכון. קיים סיכון להתפוצצות אם הסוללה מוחלפת בסוללה מסוג שגוי. יש להשליך סוללות משומשות בהתאם להנחיות היצרן.

FCC Notice

Part 15 of the Federal Communication Commission Rules and Regulations has established Radio Frequency (RF) emission limits to provide an interference free radio frequency spectrum. Many electronic devices produce RF energy incidental to their intended purpose.

Class A Equipment

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at personal expense.

Modifications

The FCC requires the user to be notified that any changes or modifications made to Avid hardware that are not expressly approved by Avid Technology may void the user's authority to operate the equipment.

Canadian Notice (Avis Canadien)

Class A Equipment

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Rack-mount Requirements

(Hebrew) דרישות לשיבוץ כונן

- Elevated Operating Ambient — If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment might be greater than room ambient. Therefore, consider installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

סביבת הפעלה מוגבהת — במקרה של התקנה בהרכבה סגורה או מרובת-יחידות בשיבוץ כונן, טמפרטורת הסביבה במארז עשויה להיות גבוהה מזו של סביבת החדר. לכן, שקלו להתקין את הציוד בסביבה המתאימה לטמפרטורת הסביבה המרבית (Tma) שצוינה על-ידי היצרן.

- Reduced Air Flow — Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

  Avid AS3000 airflow is from the front of the enclosure to the rear. Make allowances for cooling air to be available to the front panel surface and no restrictions at the rear.

זרימת אוויר מופחתת — התקנת הציוד בשיבוץ כונן צריכה להיעשות כך שכמות זרימת האוויר הדרושה להפעלה הבטוחה של הציוד תתקיים. זרימת אוויר ב- Avid AS3000 מגיעה מהמארז לחלק האחורי.

אפשרו מעבר של אוויר קירור אל משטח הלוח הקדמי, ללא מחסומים בצד האחורי.

- Mechanical Loading — Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Make sure your rack enclosure is stable enough to prevent tipping over when one or more Avid AS3000 servers are extended on the sliding rails.

עומס מכני — הרכבת הציוד בשיבוץ כונן צריכה להתבצע באופן המונע מצבים מסוכנים עקב עומס מכני לא-שווה.

ודאו שהמארז יציב מספיק כדי למנוע נטייה של הציוד כשמערכת Avid AS3000 אחת או יותר נמצאות על מסילות ההחלקה.

- Circuit Overloading — Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

עומס יתר במעגל — יש להתחשב בחיבור הציוד לאספקת חשמל ועל ההשפעה שעשויה להיות לעומס יתר על הגנה מפני עומס יתר וחיווט אספקה. יש להקדיש שיקול דעת ראוי בנוגע לדירוגי ציוד בעת טיפול בעניין זה.

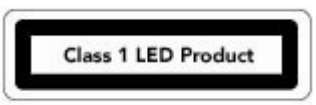
- Reliable Grounding — Reliable grounding of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (for example, use of power strips).

הארקה אמינה — יש לשמור על הארקה אמינה של ציוד משובץ כונן. יש להקדיש תשומת לב מיוחדת לחיבורי אספקה מלבד חיבורים ישירים להסתעפות המעגל (לדוגמה, שימוש במפצלים).

- Inside Enclosure Access — If you want to extend the enclosure, and remove the top cover, you must allow 0.5 in (1.3 cm) clearance on top of the enclosure for cover removal.

גישה לפנים המארז — אם ברצונכם להרחיב את המארז ולהסיר את המכסה העליון, יש להשאיר מרווח של 0.5 אינץ (1.3 ס"מ) בחלק העליון של המארז עבור הסרת המכסה.

LED Safety Notices



Avid hardware might contain LED or Laser devices for communication use. These devices are compliant with the requirements for Class 1 LED and Laser Products and are safe in the intended use. In normal operation the output of these laser devices does not exceed the exposure limit of the eye and cannot cause harm.

Standard to which conformity is declared: (Class 1 Eye safe per requirements of IEC 60825-1 / CDRH)

(Hebrew LED Safety Notices)

הוראות בטיחות של נורות LED

חומרת Avid עשויה לכלול נורות LED או התקני לייזר לצורך תקשורת. התקנים אלה תואמים לדרישות עבור נורות LED ומוצרי לייזר מסוג Class 1, והינם בטוחים לשימוש כראוי. בהפעלה רגילה, הפלט של התקן לייזר זה אינו חורג ממגבלת החשיפה של העין, ואינו יכול לגרום לנזק.

תקן ההתאמה המוצהר: (בטיחות עין מסוג Class 1 לפי דרישות IEC 60825-1 / CDRH)

European Union Declaration of Conformity

CE

Declaration of conformity
Konformitätserklärung
Déclaration de conformité
Declaración de Confomidad
Verklaring de overeenstemming
Dichiarazione di conformità

We/Wir/Nous/WIJ/Noi:

Avid Technology
75 Network Drive
Burlington, MA, 01803 USA

European Contact: Nearest Avid Sales and Service Office or
Avid Technology International B.V.
Sandyford Industrial Estate
Unit 38, Carmanhall Road
Dublin 18, Ireland

declare under our sole responsibility that the product,
erklären, in alleniniger Verantwortung,daß dieses Produkt,
déclarons sous notre seule responsabilité que le produit,
declaramos, bajo nuestra sola responsabilidad, que el producto,
verklaren onder onze verantwoordelijkheid, dat het product,
dichiariamo sotto nostra unica responsabilità, che il prodotto,

Product Name(s): AS3000

Model Number(s): 7020-30088-XX

Product Option(s): This declaration covers all options for the above product(s).

to which this declaration relates is in conformity with the following standard(s) or other normative documents.
auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder Richtlinie(n) übereinstimmt.
auquel se réfère cette déclaration est conforme à la (aux) norme(s) ou au(x) document(s) normatif(s).
al que se refiere esta declaración es conforme a la(s) norma(s) u otro(s) documento(s) normativo(s).
waarnaar deze verklaring verwijst, aan de volende norm(en) of richtlijn(en) beantwoordt.
a cui si riferisce questa dichiarazione è conforme alla/e seguente/i norma/o documento/i normativo/i.

The requirements of the European Council:

Safety: Directive 2006/95/EC

UL 60950-1, 2nd edition
CAN/CSA-C22.2 No. 60950-1-07; 2007
IEC 60950-1, 2nd edition
EN 60950-1:2006

EMC: Directive 2004/108/EC

EN55022:2006 /A1:2007
EN55024:1998 /A1:2001 /A2:2003
EN61000-3-2:2006
EN60000-3-3:1995 /A1:2001 /A2:2005

Gerrett Durling, VP of Engineering, Shared Services

Issued In Burlington MA, USA 2011

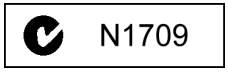
Disposal of Waste Equipment by Users in the European Union

This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

Argentina Conformity

Made in USA

Australia and New Zealand EMC Regulations



Ken Hopkins
Avid Technology (Aust) Pty Ltd
c/o – Elliot House
Suite 810, Level 8
140 Arther St
North Sydney
NSW – 2060

Japan EMC Regulations

Class A Equipment

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take corrective actions. VCCI-A

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI－A

Korean EMC Regulations

Class A Equipment

Please note that this equipment has obtained EMC registration for commercial use. In the event that it has been mistakenly sold or purchased, please exchange it for equipment certified for home use.

다음을 주지하십시오: 이 장비는 상업적인 사용을 위한 EMC 등록을 얻었다. 그것이 잘못되게 판매되거나 구매되면 일 경우에는, 가정 사용을 위해 증명된 장비를 위해 그것을 교환하십시오

Taiwan EMC Regulations

Taiwan EMC Regulations BSMI Class A EMC Warning

警告使用者:

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Warning Statement

1. **UV ray radiation**
   - Following statement or equivalent:

     警告： 開啟前請先關閉UV 燈

   - Following marking or other equivalent marking:

2. **Operator touchable area protection**

   Operation manual should have following statement and statement should be shown on device, or put on similar sentence:

   警告

   危險可動部位

   請遠離手指及身體其他部位

3. **Heat-related hazards**

Injury may result from high temperatures under normal operating conditions, causing:

- Burns due to contact with hot accessible parts
- Degradation of insulation and of safety-critical components
- Ignition of flammable liquids

Examples of measures to reduce risks include:

- Taking steps to avoid high temperature of accessible parts
- Avoiding temperatures above the ignition point of liquids
- Provision of marking to warn USERS where access to hot parts is unavoidable

High temperature warning marking — you may use the following high temperature warning marking:

4. Mechanical hazards

   Injury may result from:

   - Sharp edges and corners
   - Moving parts which have the potential to cause injury
   - Equipment instability
   - Flying particles from imploding cathode ray tubes and exploding high pressure lamps

   Examples of measures to reduce risks include:

   - Rounding of sharp edges and corners
   - Guarding
   - Provision of SAFETY INTERLOCKS
   - Providing sufficient stability to free-standing equipment
   - Selecting cathode ray tubes and high pressure lamps that are resistant to implosion and explosion respectively
   - Provision of markings to warn USERS where access is unavoidable

5. **Radiation**

   Injury to USERS and to SERVICE PERSONS may result from some forms of radiation emitted by equipment.

Examples are sonic (acoustic), radio frequency, infra-red, ultraviolet and ionizing radiation, and high intensity visible and coherent light (lasers).

Examples of measures to reduce risks include:

- Limiting the energy level of potential radiation sources
- Screening radiation sources
- Provision of SAFETY INTERLOCKS
- Provision of markings to warn USERS where exposure to the radiation hazard is unavoidable

6. **Chemical hazards**

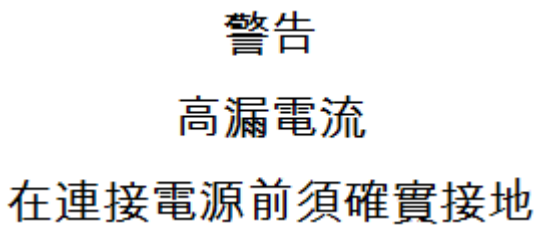
   Injury may result from contact with some chemicals or from inhalation of their vapors and fumes.

   Examples of measures to reduce risks include:

   - Avoiding the use of constructional and consumable materials likely to cause injury by contact or inhalation during intended and normal conditions of use
   - Avoiding conditions likely to cause leakage or vaporization
   - Provision of markings to warn USERS about the hazards

7. **Safety warning statement for equipment that is under hazardous voltages**
8. **Equipment with touch current exceeding 3.5 mA**

   One of the following labels, or a label with similar wording, shall be affixed adjacent to the equipment AC MAINS SUPPLY connection:



9. **An EUT that provides TELECOMMUNICATIONS NETWORK connection ports for connection of multiple items of other telecommunications equipment shall not create a hazard for USERS and TELECOMMUNICATIONS NETWORK SERVICE PERSONS due to summation of TOUCH CURRENT**

警告

高漏電流

在連接電信網路

前須確實接地

警告

高接觸電流

在連接電信網路

前須確實接地

10. **Replaceable batteries**

    If an equipment is provided with a replaceable battery, and if replacement by an incorrect type could result in an explosion (for example, with some lithium batteries), the following applies:

    - If the battery is placed in an OPERATOR ACCESS AREA, there shall be a marking close to the battery or a statement in both the operating and the servicing instructions
    - If the battery is placed elsewhere in the equipment, there shall be a marking close to the battery or a statement in the servicing instructions

    The marking or statement shall include the following or similar text:

警　告

本電池如果更換不正確會有爆炸的危險

請依製造商說明書處理用過之電池

11. **Warning to service persons**

Suitable markings shall be provided on the equipment or a statement shall be provided in the servicing instructions to alert a SERVICE PERSON to a possible hazard, where both of the following conditions exist:

- Where a fuse is used in the neutral of single-phase equipment either permanently connected or provided with a non-reversible plug
- Where, after operation of the fuse, parts of the equipment that remain energized might represent a hazard during servicing

The following or similar wording is regarded as suitable:

注意

雙極性 / 中性線已接熔線

Avid
75 Network Drive
Burlington, MA 01803-2756 USA

Technical Support (USA)
Visit the Online Support Center at
www.avid.com/support

Product Information
For company and product information,
visit us on the web at www.avid.com